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CHORAL ORCHESTRATION

BY

CECIL FORSYTH

Author of "Orchestration," "Music and Nationalism," "The English Musical Renaissance," and "A History of Music" (Stanford-Forsyth)



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Preface

THE number of anthems and other choral works written each year by English and American composers is enormous. Most of these are rarely performed with orchestral accompaniment. But the proportion is increasing; and it is most desirable, in the interests of musical culture, that this increase should continue, however small the orchestral force employed may be.

Organists constantly inquire for a short handy book which will give them a technical grounding in the scoring of their compositions. And it is for their use that this slim volume has been written. It makes no pretence of taking them into the high sun-smitten pastures of modern orchestration. But it does claim to lead them to the foothills thereunder, and to deal practically with the routine problems which face them on every page of their compositions.

General principles have by no means been avoided—indeed, they are the foundation of the book. But they are shown mainly in their application to every-day orchestral necessities. When once these applications have been grasped, there is nothing to prevent their extension into the more elaborate fields of instrumentation, according to the musical ability of the individual composer. A *foundation-technique* is the thing to aim at, a technique that gives one ease and certainty of orchestral method.

The plan of the volume is, I think, new. It amounts to this: that the reader is presented with a complete composition, and is then taken through it bar by bar, almost as if in conversation with a friendly critic. First, the musical difficulties of the work are considered in large blocks, as it were; the orchestral possibilities of each passage are then balanced one against the other; then, when a decision has been made, the details of the orchestral execution are taken up and explained.

In this way it is hoped that organist-composers may be encouraged to a better study of the subject of orchestration, not as a platonic text-book affair that is wholly outside their own sphere of action, but as a practical part of their profession. An organist who can give even one performance a year of a work written and orchestrated by himself may find that he is sowing seeds that will produce a crop of musical fruitfulness far beyond his anticipations. In small towns, remote from the great centres of national activity, he really owes this to the community in which he lives. And it is a species of healthy "provincialism" to which every lover of art should accord his heartiest support.

These ideals call for much musical planning and much quiet preparation. Let us then remember the answer that Aristotle is said to have made when he was asked where the Muses dwelt: "In the souls of those that love work."

CECIL FORSYTH.

Choral Orchestration

Choral accompaniment is not the main business of an orchestra. It is a secondary and occasional task, usually undertaken by the players without much pleasure, and often carried out in a way that does not bring any great joy to the audience.

Pitted against the chorus each player has an uncomfortable sense of loss in his own personal value. His daily experience has given him an unerring feeling for current orchestral dynamics, and in time this scale becomes almost a second nature to him. He regards it much as a philosopher regards the law of gravitation; and—it must be confessed—he often claims an aristocratic proprietorship in the law and its workings. Then comes the choral performance, at which the big democratic planet Vox Populi swims into his ken. He finds that what he has been considering the *immutable* has become the *transitory*. Vast readjustments are necessary: but for these there is neither time nor encouragement. Hence comes much rough and careless orchestral playing, and a general effect of muddled *mezzoforte*—the worst type of orchestral criminality.

Meanwhile, the man in the audience holds on to his chair and wonders why all this unmusical wickedness should be visited on him only at a *choral* performance. He does not complain—Anglo-Saxon audiences never do, except by the practical method of staying away from the next concert—but he registers a mental *crescendo* of irritation at all the fuss and pother, at being forced to hear the things which he does not wish to hear, and at having to leave unheard the things which he does wish to hear. Finally he ends by saying that choral concerts are a blatant nuisance. And, when he is in that frame of mind, it is the merest chance whether the next wind will blow him into a quartet performance or into the movies.

But, it may be asked, what is the composer doing all this time. Surely it is *his* business to foresee and overcome these difficulties. Being a choral composer he has limitless wealth (from royalties), and therefore unlimited leisure. Why is he such an incompetent bungler?

Well, the fact is that, like the rest of the world, he is "doing his best". But he labours under certain disadvantages. To begin with, as a student he is not likely to hear much about the proper presentation of choral music. That is perhaps unavoidable. His youthful days are filled with aspirations and counterpoint exercises. Then, if he turns to books, he is likely to find himself somewhat undernourished mentally. In general works on orchestration space cannot be spared for the adequate illustration of this particular topic. From them he will probably learn no more than this: that choral works should be scored thickly and solidly; but that, as choruses vary in number from fifty to five thousand, any examination of principles or setting-forth of rules is so much waste of time. The consequence is that, even if he has had two or three choral works performed, he will probably rely on a miserable rule of thumb which has no relation to the true *analytic* that precedes all useful artistic attainment. And what is more, he will possibly go on to say that there is no method for accompanying choral music; that it is nothing but accident and "fake" from beginning to end; and that therefore the best way is to put down as many notes as possible and leave the result to chance. Q. E. D.

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All this is, of course, the merest nonsense. The factors in the problem are just as easily ascertainable as the factors in any other musical problem. But they are not to be found, nor is the problem to be solved, by regarding the two elements, the choral and the orchestral, as violently opposed to each other and incapable of artistic fusion. If one has the brains and the "inner ear", one can start from the idea of simple writing in one colour—say strings—and progress to the more complex idea of strings plus two bassoons, or of strings plus four horns. And from there one can proceed upwards through all the tinted winding paths of musical fancy till one arrives at the summit, the mountain-view of the full orchestra, whether used as a complex form of contrapuntal speech or as a single massive harmonic utterance.

But, now that we are at the mountain-top, what is to prevent us these days from rising into the air above the mountain? What is to prevent us taking the voices, one by one or in a group, and associating them with the whole or with any part of our orchestral fabric at pleasure? Associating them, I mean, not as a dreaded outside element that is bound to struggle with our orchestra and blot it out, but as a congenial friendly factor of infinite delicacy and power. Essentially we are only completing our own logic by adding the last and most perfect of musical sounds. And, in adding them, we retain all our freedom of musical treatment. For, just as we can view the orchestra in its dual capacity, harmonic, and contrapuntal; so we can view the voices in relation to the instruments as only partially distinct from them by nature, and therefore either to be used for purposes of contrast, or to be fused with them into one warm tonal combination.

No voice exempt, no voice but well could join
Melodious part, such concord is in Heaven.

Surely this is the simplest, the most obvious, and the most practical way of looking at the problem. It is not a purely orchestral problem at all; but a vocal-instrumental problem, the key to which is engraved with the motto "industry and sympathy".

Here our old bugaboo "Size-of-the-chorus" raises his ugly head and hisses. The hiss sounds venomous, but there is nothing much in the way of fangs behind it. We all know that a chorus *can be* anything from fifty to five thousand. But I would like to put this question: supposing a composer were writing a choral work and were asked to make a bet as to whether his work would be sung by fifty or five thousand voices, what would his answer be? "One hundred and fifty" obviously.

Now let us approach a little nearer to our problem. Let us try to see its special difficulties—how to attack and overcome them. Choral scoring is, first, a matter of broad decisions; and, then, of rather heavy dog-work in carrying them out. The decisions must be right, and the workmanship must be right. If either is wrong, we may expect bad results in the concert room. Naturally experience counts in both. But, with the average musician who is not an orchestral expert, there is less likelihood of faulty decisions than of their imperfect execution. That almost goes without saying. In carrying out the details of the dog-work the main lines of the original decision may get blurred.

The two main questions, then, are "what to do" and "how to do it". And, as an answer to these two questions, I propose in this little volume to adopt a somewhat unusual method. Instead of limiting myself to generalized good advice backed up by picked examples from the great masters, I intend to take an actual work recently written for public performance and scored with the sole object of enforcing its musical value—certainly with no idea of its being made the subject of a book.

The work that I have selected for this purpose is Professor Walter Henry Hall's *Festival Te Deum* composed for the Peace Celebrations and first performed at Columbia University, New York, May 5, 1919. A complete copy of the *Te Deum* is printed at the end of this volume; and I shall dissect the whole work out, six bars at a time, placing the

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original copy for organ and voices at the head of each left-hand page, with its orchestration on the page opposite. In this way the reader will be able to look at the work in big blocks, as occasion may demand, and at the same time I shall be able to direct his attention to the details of the orchestration, and point out how it has been built up.

The text will be arranged so as to tally as nearly as possible with the music. This is generally feasible. But naturally when one is considering the pros and cons of a lengthy musical section, a certain amount of reference has to be made both backwards and forwards. However, it is quite certain that nothing is so distracting to quiet study as the constant turning and returning of pages. Outside these references, therefore, I have kept the text and the music as closely in contact with one another as I could. This involves some irregularity in the printing, and even an occasional blank page—blank, that is to say, as far as text goes. But this is not altogether a disadvantage; provided the reader keeps before his mind the fact that the object of this book is not merely to talk about choral orchestration, but to show how it is done. When there is no easy ambling to be had on the flat field of the text, he may possibly get better exercise by putting his horse at the five-barred gates opposite.

Let us imagine, then, that we are sitting down to orchestrate this *Te Deum*. We have before us a manuscript copy or a clean printed proof free from mistakes. The pages are numbered, but of course not the bars. How do we begin? Obviously we can do nothing till we know what orchestra the work is to be scored for. We must know that accurately; and in particular we must know whether there are to be sufficient strings to balance the wind and to sound beautiful in themselves. These details, so important in their artistic outcome, are of course in the first instance only matters of money. They are beyond our control, and it is conceivable that we might be asked to score the work for a wholly inadequate orchestra. Naturally that would be a very difficult task, though certainly not one to be avoided for that reason. However, no such difficulty confronts us. We are promised two each of the wood-wind, two horns, two trumpets, three trombones, one timpanist (with an extra percussion player for the special "Festival Ending"), and strings in the proportion 12—12—8—6—6. All good symphony players.

I have just used the words "only matters of money". This needs some qualification, or rather some mental adjustment. As far as the orchestrator and the concert-giver are concerned, they are true in a general way. But to the composer, who is *conceiving* a work there is a different and deeper problem—the problem as to what is the proper orchestral force for the presentation of his ideas. That again, except with the splurgiest of splurgers, generally narrows itself down into the question "What is my necessary orchestral minimum?" There is no desire here to evade recognition of the existence of this question. It has to be faced by every composer. And composers—being humanly anxious for the performance of their works—as often underestimate as overestimate their minimum. The question is, without doubt, important—more so than these few words would seem to suggest. And, though it is itself conditioned by many social and financial factors, one may safely predict the greatest success to the composer who approaches it with the freest and least stereotyped mind. A small volume would scarcely exhaust this topic, which touches musical life at so many points. But we have only space here to make the bald statement that it exists, before we return to our *Te Deum*, with its *prescribed* orchestra.

The first thing to do is to read the work through at the desk, in order to get a general idea of its scope and to see if any sections occur more than once. It may possibly be constructed, like the *Processional to Calvary* in Stainer's *Crucifixion*, out of contrasted phrases that appear over and over again; or it may have some one early section repeated literally in a later part of the work. Such bars may or may not need rescoring. This is a question that must be faced in an honest artistic manner, not merely with the object of saving trouble. If it is plain that the dynamic level and "spread" of the two passages are pre-

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cisely the same, and are intended to be so by the composer, then it is a waste of time to recopy the orchestration. The bars, at their first appearance, can be provided with reference numbers; and the same numbers can be placed in the corresponding blank bars when the passage occurs again. The copyist will copy the bars correctly according to these directions.

Remember these two practical points:

1. In a pianoforte accompaniment the composer's dynamic intentions are usually fairly obvious. But in an organ accompaniment the same notes with a difference of registration will represent quite different sound-values, and will therefore call for differences in the orchestration. It would not be hard to quote instances of a composer intentionally using three distinct levels of sound for the same notes of his organ part, and of these being represented orchestrally in a varied scale from strings *p* to *tutti*. It is on this type of analysis into the composer's intentions that we must base the "broad decisions" mentioned above.

2. If the repeated passage does not need rescoring, it is always just as well to watch the first and last bars carefully. Except in quite trivial music, which we are not considering here, the joining-on of the tone-colours at each end almost always necessitates the writing-out of the first and last bars. So that in what is practically a sixteen-bar repeat we should probably write out the first bar on the second appearance of the passage, then leave fourteen blank bars marked consecutively 1 to 14, and then write out the last bar. But this is, of course, a matter of practical judgment according to what goes before and what comes after.

However, in turning the pages of the *Te Deum*, we find that this question of repeated passages occurs only once, and then in a very simple form. Bars 2, 3, 4 are the same as bars 75, 76, 77. And, as the passage is used with precisely the same musical intention in both places, it is pretty obvious that the same orchestration is desired.

Having settled these points we must now prepare to translate the music into full-score. There is no necessity to count the bars; but ten minutes spent in laying out the paging of the score is ten minutes spent to very good purpose. After trying various methods of doing this, I can recommend the following plan. Begin at the first bar of your printed copy and number it 1, preferably in red-pencil so that it will catch your eye easily. This represents what is to be "page 1" of your full score. Then count on about six bars, judging carefully from the character of the music how much will go easily on to your page, and put in a red 2. This is the place where "page 2" of your full-score begins. Then go on to pages 3, 4, 5, etc., till you come to the end of the work, in this case page 36. You will then have your full-score plotted out; you will know exactly how many pages of score paper you will need; and you will have the prospective paging of your full-score on the copy from which you are working—a great convenience. Note, however, that in the printed copies of the *Te Deum* in this volume these page-numbers do not appear. In their place the whole work is numbered throughout bar-by-bar for convenience of reference. But, of course, in practical scoring there would be no object in numbering the individual bars.

In laying out the paging of a score it will be found that six bars is a fair average for 4-4 time; and, as the *Te Deum* has no brilliant passage-work, that arrangement has been possible throughout the whole work. Such invincible regularity, however, is quite a rare occurrence. In fact it does not happen once in a hundred times. A few bars of elaborate figuration in the flutes, the violins, or especially the harp, may make it necessary to cut down the number of bars per page; though this again may be counter-remedied by the presence of bars where there is almost no movement. The thing to watch for is the *maximum number of notes* that may have to be written in any one bar. In 3-4 time, where the music is quite simple, eight bars can easily be written on each page. And it is obvious that, if this *Te Deum* were written in 2-4 instead of 4-4, the page would take twelve bars

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instead of its present six. Compound times, especially in slow rhythms that are apt to be split up, take up more space than simple. The somewhat unfashionable 12-8 may need a page for each three bars. While a cadenza-like passage for a solo instrument may call for still more space, even a page per bar. A little practice will soon give the student an "eye" for the cunning arrangement of these details. And he should keep before his mind the fact that one of his main objects is to produce a score that is clear and easily read by conductor and copyist alike. If his score is slovenly, muddled, and ill-written, he is merely interposing difficulties in the way of its performance. Bad writing is no more a proof of good musicianship than a dirty collar is proof of poetical ability. It is true that Beethoven wrote villainously. But then Mozart didn't.

So far we have not touched our score-paper. The question now arises, How many lines shall we require for this particular orchestra? We shall probably not need our extra percussion-player except in the Festival Ending. So we can leave him out of account for the moment. If we adopt the rather shabby plan of writing each pair of instruments (wood-wind, horns, and trumpets) on a single line, and of putting the first and second trombones on one line with the third on a separate line, the necessary minimum will be:

Wood-wind	4
Brass	4
Timpani	1
Strings	5
<hr/>	
	14

This niggardliness of paper is not to be recommended. So long as each pair of instruments is playing parallel parts with identical phrasing, there is not much to be said against it. Though, even under those rare conditions, the page often looks unnecessarily thick and muddled. But the moment one comes to figuration or counterpoint, one feels a distinct loss of freedom. Separate phrasing may have to be written for each of the instruments of a pair. And this phrasing, of course, has to be put both above and below the line. So that one often gets eight sets of dynamic and phrase-marks on four lines, the spaces between which are probably already filled with upper-part notes written on ledger lines with their tails upwards. With an orchestra of colossal size this sort of compression is sometimes inevitable. But in normal circumstances nothing of the kind is necessary. We can easily spare a line for each of our wood-wind players. The horns and trumpets, of course, need only a line apiece. It is possible to put the first two trombones on a single line; though not advisable, as they are nearly always playing in ledger lines, when written in the bass-clef.

Now, if we take some ordinary upright score-paper, 13½ x 10½ inches, we can get everything comfortably on to twenty lines, leaving ourselves plenty of space both on and between the staves, and a blank line above the first violins, which line we can turn to account later for our extra percussion-player. This is the scheme:

Wood-wind	8
Horns	1
Trumpets	1
Trombones	3
Timpani	1
Blank	1
Strings	5
<hr/>	
	20

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The next thing to do is to rule the score exactly according to the paging that has been red-pencilled on the printed copy. If the score is a very thick one, it is as well to divide the paper up into two-sheet (eight-page) sections. With a short work, like this *Te Deum*, there is no necessity for doing so. The paper can be laid together in one section, with an extra outer sheet as cover. In ruling the lines take care to leave half an inch of space before bar 1 on page 1, so that the names of all the instruments may be written in clearly. The lines themselves may be either scored from the bottom to the top of the page, or they may be broken into groups. The latter is the better plan, though it adds slightly to the labour of ruling. If the score is to be broken, the best way is to break it into three sections, one for the wood-wind, one for the brass, percussion, and harp, and one for the strings.

By no means omit to transfer the red-pencil paging of the copy to the left- and right-hand top corners of the score, and write these numbers in a thick black unmistakable hand. This advice is not quite so puerile as it sounds. For the musical sequence of a composition is not nearly as obvious to the copyist as to the composer, and a misplaced leaf has before now had disastrous results at rehearsal. On the other hand the writing-in of clefs and key-signatures at the beginning of each left-hand page is a pure waste of time, and nothing more. The writing-in of the names of the instruments, however, is quite another matter. It helps the copyist and conductor enormously, and should *always* be done. Use abbreviations which are perfectly distinct from each other; centre them between the lines to which they refer; and then connect the lines themselves with a little square bracket. Unless the strings are divided—that is to say so long as they occupy the usual five lines—nothing more is necessary than a square bracket grouping the five lines together, not even the word “strings.” All this can be done in a tenth part of the time that it would take to write-in the key-signatures. Here are the abbreviations exactly as they appear on each left-hand page of the manuscript full-score of the *Te Deum*.

Fls.
Obs.
Clars.
Fags.
Hrns.
Tpts.
Tbns.
Timp.

Verdi used to score in pencil. It is by far the easiest way; particularly for a beginner, who may be something of a specialist in “second thoughts”. Indiarubber, as we all know, is the handmaiden of pencil, very easy-going and affable in her treatment of his mistakes. Misdirected ink, on the other hand, requires a major or minor surgical operation. Against pencil it is urged that he rubbeth off and lacketh permanence. Alas! the charge is true. Yet is the pencil less permanent than the music? This might well be made the subject of a threnody. . . .

But there is a more serious charge against pencil. If we are scoring that special sort of music that demands a great deal of “cueing”—that is to say, the writing of small notes into alternative instruments—it is difficult to distinguish the miniature cue-notes from the original big-notes. They all look much about the same size. Furthermore, the constant writing in pencil gives one a certain carelessness. One knows that the indiarubber is always at hand; and that fact deters one from acquiring the genuine orchestral habit-of-mind, the habit of pouncing down hawk-like on the inevitably right notes. Ink corrects this mental flabbiness. If we were ancient Assyrians, compelled to score on wet clay and

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send our symphonies to the baker every evening, we should attain a remarkable level of orchestral certainty.

Having disposed of this point, we proceed to write-in the names of the various instruments with their clefs, key-signatures, and time-signatures from top to bottom of the first bar. All this is plain sailing, except for the clarinets and trumpets. What key are they to be in, B-flat or A? The main key of the piece, C, gives us easy signatures (two sharps or three flats) for both pairs of instruments. There are temporary modulations in the music both north and south of C major—so that does not help us much. However, as there is a new key-signature of three flats at bar 128, that would put the A-clarinets and A-trumpets into six flats. We shall therefore use B-flat instruments throughout the work, only adding that the character of the music is so simple that the question raised has very little substance in it.

Let us now take the *Te Deum* to the piano and play it through once from beginning to end, keeping our orchestral eyes and ears well open for the general character of the work and also for any particular moments in it that may suggest particular treatment. I suppose that we shall agree that in its main lines it is loud, bold, and triumphant. Its orchestral expression needs richness, sonority, even brilliance. The brass will certainly have to play. Looked at a little more narrowly it is obvious that the whole of the accompaniment is purely organ-music, with the organ's limitations and its strength. The written notes, as played on the piano, do not always represent the sounds intended.

We can now return to our desk and, forgetting the existence of the piano, try to hear the opening orchestrally to the best of our ability. Suppose we begin with bars 1 to 16 inclusive, that is to say the short introduction, the first choral passage, and the bar that sets the scheme for the second phrase. Our object is to decide broadly what can be done with these sixteen bars. We can then jot down our decisions on the copy and proceed to carry them out.

The opening is plain enough. From the character of the music there can be no question of "saving up" anything here. It must be scored *tutti* in big massive chords written much as they are in the organ-part. Under bar 1 then in our printed copy we jot down the word "*tutti*." That is our first decision. But what are we to do when the chorus enters? Is the orchestra to go steadily on exactly as it began? No, there are better ways than that. The mere playing of the music on the piano may have suggested some of them already to the reader's mind. How would it be to take off the whole of the strings and wood-wind and the drums on the down-beat of bar 5, leaving our seven brass instruments to support the choral entry? Let us try it. We jot down our second decision "brass alone" under bar 5. The brass, of course, might continue without any change whatever right down to the third beat of bar 15. However, it would be much more delightful if we made a little tone-cycle of these fifteen bars, bringing back the wood-wind and the strings in turn, and so ending the whole passage as we began it.

The question is, How is this to be done? The re-entry of the wood-wind (eight players only) cannot add much to the ensemble, but the re-entry of the strings (forty-four players) can help materially, if it is properly managed. It would be better therefore to let the wood-wind re-enter first. It happens that there is only one bar sufficiently strong harmonically to give the wood-wind any chance at all, and that is bar 10. So, under bar 10, we jot down our third decision "wood-wind." Now we have to find a place for our string re-entry. There is a big sign-post here in the music itself. In bar 12 we have the chorus, brass, and wood-wind holding on to a high well-placed chord, and crescendoing on it. But the organ-pedals are also helping. And though their part would be more effective if it were a contrapuntal part, still it gives a distinct feeling of added force, and offers us our desired opportunity. Decision no. 4: under the second beat of bar 12, "strings."

We have now completed our little tone-cycle, and the only question left undecided is the treatment of the new passage (in A minor) beginning on the last beat of bar 15. It is

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1 2 3 4 5 6

Allegro maestoso. *f*

Soprano
Alto
Tenor
Bass

We praise Thee, O God, we ac-

Organ

f

obvious that the orchestra must be lightened here, and the quality made sweeter and more lyrical. Were the melody sung by a solo voice, a string-accompaniment with perhaps a single wood-wind instrument would be enough. But we need something more here. The sound of the orchestra for this particular passage must be *appreciably* altered, but we must not lose sight of the general character of the music in doing so. Fortunately the little counter-melody in the accompaniment gives us a cue. And we are able to make a distinct change in tone-quality by assigning it to all the violins in octaves, at the same time using the wood-wind unobtrusively and perhaps with a certain amount of interplay as between the various instruments. The horns might be omitted; but we shall probably keep them, marking them below the dynamic level of the rest of the orchestra, and writing their parts with as little movement as possible. No heavy brass. Decision no. 5: under the last beat of bar 15, "violins in octaves, wood-wind, horns."

As we now have our five broad decisions complete, it may be as well to write them down on a half-sheet of note-paper as a mental compass by which to steer our orchestral course. Here they are:

Bar 1 :	<i>tutti</i>
Bar 5 :	brass alone
Bar 10 :	add wood-wind
Bar 12 :	add strings
Bar 15, } :	{ strings (vlns. in octs.),
last beat }	{ wood-wind, horns

There is nothing much to be said about the scoring of the introduction. It is practically a transliteration of the written notes of the organ-part with the addition of a pedal C on the drums. The melody is in one octave only and is given to the first violins reinforced by the two flutes in unison. Had we not decided on the purely brass orchestration at bar 5, we should probably have used the two trumpets in unison to play this melody an octave below the first violins. But as it is, they are better playing harmony notes in these bars. I need not say that the "effect" in bar 5—the sudden cessation of everything but the brass—is totally spoilt *orchestrally* by the entry of the chorus. But from the vocal-instrumental point of view it is admirable. It gives us exactly the noble sonorous tone which will exalt this opening. From the technical side it is helped by the fact that the lower bass-octave is present in bars 2, 3, 4 on the double-basses, but ceases on the down-beat of bar 5.

1 2 3 4 5 6
Allegro maestoso.

1
 Flutes *f*

2
f

1
 Oboes *f*

2
f

1
 Clarinets in B \flat *f*

2
f

1
 Bassoons *f*

2
f

2 Horns in F

2 Trumpets in B \flat

1
f

Trombones

2
f

3
f

Timpani in C, G
f tr

Bass Drum and Cymbals
f

Allegro maestoso.

1st Violin *f*

2nd Violin *f*

Viola *f*

Cello *f*

Bass *f*

CHORAL ORCHESTRATION

7 8 9 10 11 12

knowledge Thee to be the Lord. All the earth doth worship Thee, the Fa

The wood-wind, when it re-enters at bar 10, is kept up reasonably high—high enough, that is to say, to add *something* at any rate in the way of point and brightness to the ensemble, but not so high as to sound shrieky. A more effective opening for the bassoons in bar 9 would be made by writing their first three notes one octave lower. These bottom notes on the bassoon—especially the low B-flat—have immense strength. But here they would merely fog our orchestral scheme, which is to add as much as possible upwards, and not to write anything below the third trombone octave. A word will be said presently as to the actual notes which have been added in bar 10. To the ear, filled as it is with the mass of sound from the chorus and the brass, they will not “tell” at all distinctly. Still, if they are not strong enough to throw a ray of sunlight, they will at any rate add a splash of gilt to our orchestra.

The re-entry of the strings in bar 12 does not call for much comment. But notice exactly how it is managed. In the first place, *all* the strings are used. In the second place, they are in a three-octave unison, *marcato*, and helped a good deal by the two bassoons and the third trombone, which play in unison with the cellos. After four notes they change from unison to ordinary four-part harmony. Of course if this entry had been scored only in the pedal-octave, it would have lacked power and distinction.

7 8 9 10 11 12.....

sva.....

Fls.

1

2

Obs.

1

2

Clars.

1

2

Fags.

1

2

Hrns.

Tpts.

1

Tbns.

2

3

Timp.

II

CHORAL ORCHESTRATION

13 14 15 *mf* 16 17 18

therev - er - last - ing. To Thee all An-gels cry a - loud the

We now come to the little A minor tune beginning on the last beat of bar 15. The brass stops playing; and the whole orchestra, hitherto *forte*, is now marked down to *mezzoforte*. The horns are marked still one step lower, *mezzopiano*. The basses change to *pizzicato*, which will be distinctly heard and yet will materially lighten the ensemble. The bassoons are kept up fairly high and in pretty close harmony. Finally, whereas up to bar 15 practically every note in the orchestra is detached, after bar 15 almost every note—especially in the wind—is slurred. These technical methods of making the orchestra sound lighter and sweeter may be set out in a little table thus:

Up to bar 15	After bar 15
<i>forte</i>	<i>mezzoforte</i>
Heavy brass	No heavy brass
Detached notes	Slurred notes
Heavy bottom-octave	Bottom oct. <i>pizz.</i> basses only

But let us examine the scoring of this passage, bars 16 to 26, a little more closely. The main melody is an octave-combination of first and second violins, and we rely on that to make a beautiful soaring commentary on the vocal parts. If these parts had been sung by solo voices, the first violins would probably have been written in the lower octave, more particularly as their present part is solidified by the addition of the first flute. We should then have used the second violins to play the upper notes of the easy double-stopping in the viola-part. However, in present circumstances, the octave-combination sounds very well. Its lower octave is treated with a little more freedom. The second violins play the whole tune. But in the wood-wind department it is looked on roughly as broken up into two parts. The oboe begins, and is then joined and replaced by the clarinets: then the oboe begins again, and is again joined by the clarinets.

Oboe

Clars.

Oboe

Clars.

This sort of goldsmith's work, though not especially effective when the chorus is singing, is almost a matter of orchestral routine. It lends variety to the sound, and gives the player an interest in his part and the opportunity of an occasional rest. Before leaving this passage, a word must be said as to the phrasing. It is all *legato*, but *legato* of different sorts to suit the various instruments. In the melodic line the oboe has the longest slurs.

13 14 15 16 17 18

1
Fla. *mf*

2

1
Obs. *mf*

2

1
Clars. *mf*

2 *mf*

1
Fags. *mf*

2 *mf*

Hrns.

Tpts.

1

Thns.

2

3

Timp.

mf

mf

mf

mf

pizz

mf

CHORAL ORCHESTRATION

19 20 21 22 23 24

Heavens, and all the Powers there-in To Thee Cher-u-bin and Ser - a - phin con-

Then comes the first clarinet. Then, still more broken up to the eye, come the violins and flutes. But it is all *legato*, in contradistinction to the detached style of the first fifteen bars, and will sound so. In the horn parts the object is to make the sound as unobtrusive as possible. And, as they are marked *mp*, it is feasible to use fairly long slurs right down to the *crescendo* bar 26. The harmony of these ten bars (16 to 26) need not detain us long. It is the same throughout, a mixture of bassoons, horns, and violas. Even if we had four horns at our disposal, we should probably use only two here.

A word may be said here with regard to the filling in of orchestral parts. As a rule writers on orchestration—either from want of experience or from too much experience with bad music—lay it down as almost axiomatic that holding notes should be plastered in everywhere. The mental state of the listener, who is quite able to appreciate beautiful musical contours, is wholly forgotten. On goes the plaster; and the thicker the layer, the coarser the colour has to be on top of it. It is like drug-drinking: the more you take, the more you want.

I am totally opposed to this plastering business. In fact it is at the root of almost all orchestral uncertainties in the minds of composers. Nine times out of ten the logic at the bottom of these miscalculations is that the composer has written something which is orchestrally effective and charming in itself, and has then proceeded to prevent the audience hearing what he has written. If he does not score his own work, he is often liable to grotesque misrepresentation. There is no justification for this. The composer's "spread" and "placing" of his chords must be respected. A note totally omitted from a chord must be supposed to be omitted for a good reason. As a rule it is the easiest thing in the world to see when a composer has left out notes merely because they cannot be played by two hands on the pianoforte. A little license in the outside parts, and particularly for the brass when they are playing *forte*, is about all the orchestrator should demand.

But the beginner has another difficulty to face when it comes to filling in parts. Organist-composers who have occasionally brought me their scores for criticism have sometimes expressed a natural feeling of helplessness when faced with this somewhat mechanical task. Accustomed as they are to unloosing hvrricanes with a touch of their fingers, they confess to a certain blank dismay when they have to choose irrevocably between two or three puny wood-wind instruments. The modern organ gives them fifty different tone-colours, each of which is homogeneous from the top of its scale to the bottom. Within the orchestra this sort of smooth effortless perfection scarcely exists. In its place we have a dozen different instruments, mostly of high and ancient lineage. They are almost all "survivors of the fittest" in respect of their beautiful tone-colours. But their constitutions are amazingly cranky; and when mishandled by the injudicious composer they are liable to protest with dreadful shrieks and groans. I need not particularize here. The

13 20 21 22 23 24

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

This musical score page contains measures 13 through 24. The instrumentation includes two Flutes (Fls.), two Oboes (Obs.), two Clarinets (Clars.), two Bassoons (Fags.), Horns (Hrns.), Trumpets (Tpts.), three Trombones (Tbns.), and Timpani (Timp.). Measures 13-24 show a complex orchestral texture. The woodwinds (Flutes, Oboes, Clarinets, Bassoons) have active parts with many notes and slurs. The Horns play sustained chords. The Trombones and Trumpets are mostly silent, indicated by whole rests. The Timpani part is also mostly silent. The bottom of the page shows the beginning of measure 25, which continues the woodwind activity.

CHORAL ORCHESTRATION

26 26 27 *ff* 28 29 30

tin - ual-ly do cry, Ho - - ly, Ho - - ly,

ff

ff Gt.

The musical score consists of four staves. The top two staves are for voices, with lyrics 'tin - ual-ly do cry, Ho - - ly, Ho - - ly,'. The bottom two staves are for piano and guitar. The piano part is marked *ff* and the guitar part is marked *ff* Gt. The score shows measures 26 through 30. Measure 26 has a vocal entry. Measure 27 has a vocal entry and a piano/guitar entry. Measure 28 has a vocal entry and a piano/guitar entry. Measure 29 has a vocal entry and a piano/guitar entry. Measure 30 has a vocal entry and a piano/guitar entry.

point is that the outsider, used to a machine-made balance of tone, is apt to be non-plussed when he first meets this stiff-necked generation of orchestral individualists. His complaint is that he knows what he wants, but that he has no idea how to get it on paper.

The usual answer to this complaint is that he lacks experience. The more helpful answer is that he lacks knowledge and analysis, both of which should precede experience. The first, that is to say the detailed knowledge of the orchestral instruments with their limitations and capabilities, he can and should get from instrumentation books. But he is earnestly advised to acquire this information from some book which presents him, not merely with the meagre statements of clefs and compasses, but with the treatment and historical background of the instruments as they exist today. If he intends to employ that marvellous organization the modern orchestra, the least he can do is to understand what it is. The analytical side of the matter is just as important, perhaps more so. And it is just in that field that heavy spade-work is an absolute necessity to the student. Miniature scores are almost useless. They have their value as guarantees of musical respectability to their owners. But for hard analytical study few of them are worth the paper on which they are printed.

However, the student *must* undertake the dissection of full-scores, even if he does not resort to the heroic old practice of copying them out. And it is for that reason that this book is arranged in its present form, so that the student, after reading the letterpress, can compare the two versions again and again, bar-by-bar and note-by-note.

Here I should like to suggest to him a little lesson on the subject of the additional notes which are sometimes necessary in transferring an organ-part to a full orchestral score. Let him take a sheet of music-paper, and number fifteen bars, corresponding to the first fifteen bars of the *Te Deum*. Let him compare the organ-part rigorously chord-by-chord with the full-score; and whenever he finds a sound in the latter that is not in the former, let him enter it on his blank sheet, however odd-looking the result may be. As an example bars 7, 8, 9, 10 would stand as follows:

7 8 9 10

The musical score shows four staves for measures 7, 8, 9, and 10. Measure 7 has a vocal entry. Measure 8 has a vocal entry. Measure 9 has a vocal entry. Measure 10 has a vocal entry. The piano part is marked *ff* and the guitar part is marked *ff* Gt. The score shows measures 7 through 10.

If he will do this conscientiously, and further notice how, whatever the instrumental combination may be, the outstanding instruments always have the main notes of the composer's chord, and the additional notes are always allotted to the feebler instruments, he will learn one good lesson in orchestration.

25 26 27 28 29 30

sva.....

Fls. 1 *f*

Fls. 2 *f*

Obs. 1 *f*

Obs. 2 *f*

Clars. 1 *f*

Clars. 2 *f*

Fags. 1 *f*

Fags. 2 *f*

Hrns.

Tpts. *mf*

1 *mf*

Tbns. 2 *mf*

3 *mf*

Timp. *mf*

arco

f

17

CHORAL ORCHESTRATION

31 32 33 34 35 36

Ho - ly: Lord God of Sab - a - oth; Heaven and earth are

This way of looking at things is a matter of routine. Suppose we are relying on the strings alone to define the composer's intentions. That will not prevent us writing additional notes for two or three light wood-wind instruments according as circumstances demand. Similarly with the brass. If they are all playing, we must be sure first to transliterate the composer's actual chords for the heavy instruments (trumpets, trombones, and tuba). Then we can add the four horns. The latter will not be heard so well, and we shall be wise if we confine our efforts to keeping them to solid four-part chords in their middle register. A moment later they may be brought forward prominently for purposes of definition; and then we should, of course, plot-out their parts first.

All this is not so much a matter of counting the actual number of notes that are added to a given chord, as of tonal balance between the various instruments. For instance, in the example given above we appear to have added almost nothing in bars 7, 8, 9, and to have added four complete octave-doublings in bar 10. This is our wood-wind re-entry, as prearranged. But yet, with the chorus and brass going full-tilt, the wood-wind will add only a slight weight—less than the weakest "mixture" on the organ. And this is so, even though we have written three of the eight instruments outside the upper limits of the printed organ-part.

We now come to the three "Holy's," bar 27 and onwards. Here we have something of a problem. We had better go back to our printed copy and take a bird's-eye view of what is coming. The three "Holy's," bars 27 to 41, are marked "*ff* Gt." But they are succeeded by a passage, bar 42 onwards, regularly built-up of a two-bar phrase "*mf* Sw.," followed by a phrase again marked "*ff* Gt." And the last of these loud phrases crescendos through bars 57, 58, 59 to another *ff*. In tabular form the composer's complete scheme is this:

(a) Holy <i>ff</i> Gt.	(a) Holy <i>ff</i> Gt.	(a) Holy <i>ff</i> Gt.
(b) The Apostles <i>mf</i> Sw.	(c) Praise Thee <i>ff</i> Gt.	
(b) The Prophets <i>mf</i> Sw.	(c) Praise Thee <i>ff</i> Gt.	
(b) The Martyrs <i>mf</i> Sw.	(c) Praise Thee <i>ff</i> Gt.	
(c) The Church <i>ff cresc.</i> to	(d) The Father <i>ff</i>	
(e) <i>Decresc.</i> at bar 67 to new phrase in next bar		

31 32 33 34 35 36

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

loco

This musical score page contains measures 31 through 36. The instrumentation includes Flutes (Fls.), Oboes (Obs.), Clarinets (Clars.), Bassoons (Fags.), Horns (Hrns.), Trumpets (Tpts.), Trombones (Tbns.), and Timpani (Timp.). Measures 31-34 show a complex woodwind and string texture. Measure 35 features a 'loco' marking above the flute staff. Measure 36 concludes the section with a final chordal texture. The score is written for a full orchestra, with multiple staves for each instrument family.

CHORAL ORCHESTRATION

37 38 39 40 41 42

full of the Ma - jes - ty of Thy Glo - ry. The glo-rious com-pa-ny

The whole of this passage calls for careful consideration. And we shall have to use a good deal of nice judgment. It will certainly not do *orchestrally* merely to transliterate the composer's "*ff* Gt." each time by a *tutti ff*. In the first place, where is the real high-light of the whole passage? I do not think there can be any doubt about that. It is on the last beat of bar 59, and continues down to bar 67. But there are the three "Holy's" to be considered. They are undoubtedly meant to be loud by the composer. They must therefore be supported, but without any blaring in the orchestra. The best way to do this will be to replace the horns by the heavy brass in bar 27; to give them as little movement as possible, using them in close harmony as a sort of harmonic background. The trumpets must certainly be kept as low in pitch as possible. Here are the complete chords at the beginning of their entry, bars 27 to 30:

Trumpets and Trombones

Observe here that we have taken the liberty of making the general orchestral *crescendo* in bar 26, not from *mf* to *ff*, but from *mf* to *f*. This enables us to mark the brass *mf*; and the fact that they are five heavy instruments replacing two lighter will make all the effect we require. Furthermore it gives us something up our sleeve for the high-light that is coming.

On the last beat of bar 41 begins the first of the built-up phrases lettered (b) and (c) in the table on page 18. However we score these phrases, it is obvious that we must contrive three (b's) corresponding orchestrally to each other, and three (c's) similarly corresponding. There must also be a marked contrast between the small smooth things, the (b's), and the loud jubilant upsoaring things, the (c's). How vivid that contrast is to be must be a matter of personal taste. But, having regard to all the circumstances of the composition I should say that we might make it as vivid as our orchestral conditions will permit, always remembering that we are never to employ a *ff* in our heavy brass. That is to be reserved for our high-light in bar 59. My suggestion would be this:

(b) Strings (no basses) in unison with wood-wind (no flutes); all <i>mf</i> , and playing only the actual written notes of the organ-part.	(c) Tune on 3 octaves of strings plus flute and clar. Block-chords on the rest of the orchestra. Brass <i>f</i> , strings and wood-wind <i>ff</i> .
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This musical score page contains measures 37 through 42. The instruments are arranged in two systems. The first system includes Flutes (Fls.), Oboes (Obs.), Clarinets (Clars.), Bassoons (Fags.), Horns (Hrns.), Trombones (Tpts.), and Timpani (Timp.). The second system includes additional parts for Flutes, Oboes, Clarinets, Bassoons, and Timpani. The score is written in 2/4 time. Measures 37-40 show a steady progression of notes across the woodwinds. In measure 41, the woodwinds play a half note chord, marked *mf*. In measure 42, the woodwinds play a half note chord, marked *mf*. The brass instruments (Horns, Trombones) play a half note chord in measure 41, marked *f*, and a half note chord in measure 42, marked *f*. The Timpani plays a half note chord in measure 41, marked *f*, and a half note chord in measure 42, marked *f*.

CHORAL ORCHESTRATION

43 44 45 46 47 48

of the A-pos-tles praise..... Thee. The goodly fellowship of the Prophets praise.....

ff *mf* *ff* *Gt.* *Sw.* *Gt. ff*

Of course this is by no means *the only* way in which these passages might be scored. As an example, we might reduce the whole dynamic level by putting (b) on the wood-wind and horns alone, and (c) on strings in two octaves, and *mf* brass. There are other ways too, in finding which the reader can exercise his ingenuity. But here are two small points both favouring our first suggestion. So far we have had 41 bars, and not one without brass of some sort. It will therefore be a distinct relief if we omit the brass in our (b) section here. Furthermore the actual unison of wood-wind and strings in this particular kind of smooth simple passage is delightful. The wood-wind gives the strings a deliciously reedy—sometimes almost steely—quality. It must not be continued for too long. But during a few bars, as here, it is quite welcome to the ear, especially as it is a pleasant relief after the brass. Naturally there is to be no octave-doubling: that would spoil the effect entirely. So we double the first and second oboes with the first and second clarinets, these two parts being simply the two upper string-parts with a difference of phrasing. The two bassoons, where there are three string-parts, double the lowest string-part in unison, and, where there are four string-parts, they play *divisi* with the violas and cellos. The reader should verify these statements by analyzing bars 42, 43, 46, 47, 50, 51.

The “lay out” of the (c) bars (44, 45, 48, 49, 52, 53) is simplicity itself. The only change that could be made in this orchestration, granted the original scheme, would be to confine *all* the wood-wind instruments to the block-chords. This is not an important point. Note, however, that it would be ridiculously ineffective to turn the tables, and give the tune to an octave-combination of wood-wind, while the strings played solid chords with the brass.

43 44 45 46 47 48

8va..... 8va.....

Fl. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts. 1

Tbns. 2 3

Timp.

ff mf f

23

CHORAL ORCHESTRATION

49 50 51 52 53 54

mf *ff*

Thee. The no-ble ar-my of Mar-tyrs praise:..... Thee. The holy Church throughout

mf *ff*

Sw. *Gt. ff*

We have now almost disposed of the three "Holy's." There is practically nothing to notice about the string-parts, except the very important fact that the violins are down again in the lower octave and playing in harmony with each other and with the rest of the strings—the violas doing a sort of double duty with the violins and the basses in bars 28 and 30. Simultaneously with this lowering in the pitch of the first violins the converse plan is put into operation with the wood-wind. They all enter on bar 27, and all play in the upper part of their compass, three of them above the string-limits. Owing to the marking of the brass (*mf* only) and the low pitch of the string-parts, the wood-wind here are liable to "tell" and to give, as it were, a *tutti* effect to the whole ensemble.

There are only two further points to be noticed in the scoring of this passage; one of them a matter of taste, the other of discretion. On the word "Heaven" (bar 35) the character of the melody in the accompaniment seems to call for something more brilliant and searching than the fiddles can give it in their middle register. The first violins are therefore put into the upper octave with the first flute, and the melody is doubled in the lower octave by two clarinets in unison. At the same time, as we wish to help the chorus with what we may call their semi-climax at bar 40, we introduce the horns at bar 35 to avoid any thinness, give the heavy brass momentary rests, and then allow them to *crescendo* through bar 39 to *f*, the dynamic level of the rest of the orchestra.

We have now got as far dynamically as this: seven full beats of *tutti f*. But it will be observed that, though the wood-wind (and latterly the first violins for six bars) have been playing in their upper register, the trumpet-parts have all been kept as low as the exigencies of the music would allow.

49 50 51 52 53 54

.....
sva......

Fls.
 1
 2

Obs.
 1
 2

Clars.
 1
 2

Fags.
 1
 2

Hrns.
 Tpts.
 1
 2
 3
 Timp.

mf *mf* *mf* *mf* *mf* *mf*

ff *ff* *ff* *ff* *ff* *ff*

f *f* *f* *f* *f* *f*

ff *ff* *ff* *ff* *ff* *ff*

25

CHORAL ORCHESTRATION

55 56 57 58 59 60

all the world doth ac-knowl - - edge Thee; The Fa - ther of an

The treatment of the *crescendo* beginning on the second half of bar 56 is worth a moment's study. Observe the chief points. In the first place the choral parts—practically the long held B—are reduplicated by the heavy brass in two octaves only, while the moving part is given to wood-wind and strings in four octaves. Next, the brass is dropped right down to *mp* and the rest of the orchestra to *mf*, so as to make sure of the glare when we come to the high-light at the end of bar 59. We need now have no fear of top G-sharps for the first trumpet. In fact the object for the next eight bars is to keep the brass up as much as possible. The remainder of the scoring in this passage is too obvious to call for any further comment. As often occurs elsewhere, the "setting" of its first bar (60) stereotypes the instrumentation till the next change of mood.

Notice here particularly the effect of the unison *crescendo* of the five heavy brass instruments through bars 56 to 59, as contrasted with the *fortissimo* brass harmony from bar 60 onwards. The brass-scheme here of course merely follows out the choral-scheme. But the way in which it is done will repay a little attention.

In the first place, note the omission of the horns from the *crescendo* bars. If they had been used, they would have had to be written in unison with the trombones, not with the trumpets. And as they would have added little weight in that octave, we take the opportunity of giving them a few bars rest.

In the second place, note carefully from bar 60 onwards the notes that have been added in the heavy brass—notes, that is to say, that are not in the chorus, such as the second trombone part.

In the third place, note that the first trumpet follows the vocal line throughout; but, with the rest of the brass, does not reproduce the actual syllabic inflexions of the chorus.

[illegible]

CHORAL ORCHESTRATION

61 62 63 64 65 66

in - fin - ite Ma - jes - ty. Thine a - dor - a - ble, true, and on - ly
Thine hon - or - a - ble,

The orchestration of bars 61 to 66 has already been dealt with on the previous page. In this "blank," then, I shall ask the reader's attention to the general question of the laying-out of brass parts throughout the work. I have just mentioned this point in connection with the second trombone part beginning at bar 60. But the whole work should be examined with the special object of ascertaining what notes have been added to the brass-parts, and what omitted from them. In doing this, it is as well to compare the brass both with the organ and with the chorus. When he has done this, the reader can compare the brass with the strings and wood-wind; but especially with the former, for the purpose of seeing exactly how and where the thickening of the brass-parts gives the strings freedom elsewhere.

On the question of brute-force, of which the brass undoubtedly has its share, one may admit that the work is not underscored. But of course the special character of a *Te Deum* calls for this fullness. On the other hand, this particular work does not give the orchestrator much opportunity for *variety* in the treatment of the brass. Even if it had, the range of variety to be obtained from this department is not great. Differences in dynamic marking, alterations of pitch within a somewhat narrow compass, and changes from unison to harmony or from thin to full harmony, are the orchestrator's best friends.

The *Te Deum* is 196 bars long, without the Festival Ending; and the following list gives the number of bars in which the brass is playing. The total, 142, is above the average. But, here again, the jubilant nature of the work must be taken into account. Furthermore, of the 142 bars, 51 are marked *mp* or lower. And it must be remembered that a third of the total number of bars are horn-bars. It is of course only an accident, due to the composition itself, that neither the trumpets nor the trombones happen to have been used alone.

Heavy brass and horns	57 (plus 16 in the Festival Ending)
Horns alone	49
Heavy brass without horns	20
Horns and trombones	13
Horns and trumpets	3
Trumpets alone	0
Trombones alone	0

61

62

63

64

65

66

1 Fls. 2 Fls. 1 Obs. 2 Obs. 1 Clars. 2 Clars. 1 Fags. 2 Fags. Hrns. Tpts. 1 Tbns. 2 Tbns. 3 Timp.

This musical score page contains measures 61 through 66. The instrumentation includes two flutes (Fls.), two oboes (Obs.), two clarinets (Clars.), two bassoons (Fags.), horns (Hrns.), trumpets (Tpts.), three tubas (Tbns.), and timpani (Timp.). The woodwinds and brass sections are active throughout, with various melodic and harmonic lines. The percussion section, including the timpani, provides a steady rhythmic foundation. The score is written in a key with one sharp (F#) and a common time signature (C). The measures are numbered 61, 62, 63, 64, 65, and 66 at the top of the page.

CHORAL ORCHESTRATION

67 68 69 70 71 72

mf *pp*

Son; Al - so the Ho - ly Ghost, the com -

mf *pp*

Sw.

The *diminuendo* occurs at bar 67. It is not marked in the organ-part, but of course it is absolutely essential in the orchestra, particularly in the brass department. The shrinkage is from *ff* to *mp*. But that is not all. In order to give effect to the sudden solemnity of the words "Also the Holy Ghost" we telescope the outside limits of the orchestra from four octaves and a major third (on the down-beat of bar 67) to two octaves and a major sixth (on the down-beat of bar 68):

67 68

Sw.

However, we have to provide for a still further dynamic drop in the passage that is coming, viz. the *pianissimo* in bar 71. We shall be wise to contrive this, not merely by a *diminuendo* in bars 70 and 71, but by an actual suppression of tone-colour when the drop comes. On the other hand we must exercise our taste is not making bars 68, 69, 70, and the half-bar of 71 too heavy. Now, after all has been said on the subject of fancy tone-colours, the sweetest and most perfect sound in the orchestra is the four-part string-quartet without basses. Let that, then, be our choice for the second half of bar 71. It will be unnecessary to mark it *pp*, the change is so great from what has gone before. But what are we to subtract from the forces that we have been employing up to bar 67? It must be enough to reflect the change of mood adequately, and yet leave us sufficient tone-colour to make the further drop in bar 71. All the heavy brass must go of course. Both the horns might be taken out; but perhaps, for the sake of bar 71, we will keep the first. His little bit of smooth melody will undoubtedly sound delightful in unison with the cellos. The first violins can be reinforced in the octave above by two flutes in unison. The held chords, in two octaves exactly as in the organ-part, are given to second violins and violas, in unison respectively with the clarinets and bassoons. This is more than ample. The oboes are omitted. Query: is this judicious? Answer: it is a matter of taste. But one may add that, were the chorus not singing, the upper octave of the melody would sound better if assigned to a unison of one oboe and two flutes. In that case the first violins and either the second violins or the clarinets would be omitted.

[illegible]

CHORAL ORCHESTRATION

Bar 75 brings us to the return of the introductory subject, which, we have already agreed, is not to be re-scored. We can, then, put reference numbers 1, 2, 3, in blank bars 75, 76, 77. This is done in one minute, and we pass on to the entry of the chorus in bar 78. Doubtless this will be brass *tutti*, as before. But let us pause for a moment and look forward. Bars 78 to 88 are by no means the same as bars 5 to 15. And their difference introduces us for the first time to an unsolved musical problem—the orchestral translation of a steadily moving pedal-bass. This form of musical expression, so tremendously effective on the organ, is practically unobtainable in the orchestra. However much we add to the bass-octave—bassoons, double-bassoon, trombone, tuba, cellos, and basses—we never get the true effect. We can indeed substitute something as loud; but the solidity and the fateful determination of the moving pedals are beyond the reach of the orchestra. There *is* an orchestral effect somewhat similar to it. And that is obtained by putting the moving passage on strings *tutti* in three octaves, with perhaps the addition of bassoons.

But, the reader may ask, is not that the very thing for us here? The brass and woodwind will play the upper harmony, and the strings will give the motion. Well, there are two objections to such a course. In the first place this sort of passage, to be effective, needs a certain regularity and narrowness of compass, neither of which is to be found between bars 78 and 88. No regular figure is established; and the actual scale-length between bars 79 and 83 is nearly two octaves. It is of course *possible* to jump the strings up a seventh, as opportunity occurs, in order to pin them down to one register. But if we do this with such a heavy weapon as *tutti* strings, we cannot help stultifying the passage itself. And moreover the jumps that suit one instrument do not suit another. The violins in particular, chained down as they are forced to be to their lower register, are bound to suffer.

[illegible]

CHORAL ORCHESTRATION

78 79 80 81 82 83

Thou art the King of Glo - ry, O Christ. Thou art the

But there is another and stronger reason against this procedure. And that reason is to be found in bars 200 to 207. In this Festival Ending the moving pedal-bass is consciously used, with full knowledge of the pedal-board-compass, to make its massive appeal. And it is used there with much more direction and prevision than it is in bars 78 to 88. If, then, we make our big splurge in the earlier bars with our brass and three-octave string-combination, we shall be compelled to do something the same only bigger when we come to the Festival Ending. And that is an orchestral impossibility. Probably in this particular work we shall not be able to use our three-octaves of strings at all. At any rate it is quite certain that musical common-sense demands the lowering and not the raising of our dynamic scheme at bar 78. Should the reader wish, he may re-score these ten bars according to the prescription that I have suggested above. If he does so, he may be sure that, for these ten bars, his score is the more effective of the two; but equally sure that from the viewpoint of the general orchestral prosperity of the *Te Deum*, this effectiveness is inadvisable in this particular place.

I have not hesitated to devote some space to the discussion of what may not appear to be a very important question, because it is just these preliminary considerations that are so vital in scoring choral music. The reader can now turn to the details of their execution: (1) The combination of strings, wood-wind (without flutes), and horns at bar 78. (2) The moving bass, in two octaves only, on bassoons, cellos, and basses. (3) The *piano* entry of the heavy brass at the end of bar 83, with the simultaneous addition of the flutes, and the jumping of the first violins into their upper octave. (4) The addition of the drums *piano* for the first time while the chorus is singing. (5) The dynamic marking of the brass, and particularly of the drums with regard to the rest of the orchestra. (6) The fact that, though the tone-scheme of bar 78 is considerably lowered as compared with that of bar 5, we arrive in bar 85 at an appreciably larger sound-mass than that in its corresponding bar, 12. These two latter bars, 12 and 85, should be carefully compared.

78 79 80 81 82 83

Fls. 1 *mf cresc.*

Fls. 2 *mf cresc.*

Obs. 1 *cresc.*

Obs. 2 *cresc.*

Clars. 1 *cresc.*

Clars. 2 *cresc.*

Fags. 1 *cresc.*

Fags. 2 *cresc.*

Hrns. *mf* *mp cresc.*

Tpts. *p*

Tbns. 1 *p*

Tbns. 2 *p*

Tbns. 3 *p*

Timp. *>*

cresc.

cresc.

cresc.

cresc.

cresc.

CHORAL ORCHESTRATION

84 85 86 87 88 89

ev - er - last - ing Son..... of the Fa - - ther. When Thou

Andante. p Solo

p

It is hoped that the reader will appreciate the logic of the last few paragraphs. They regard the orchestration from the viewpoint, not of variety, but of balance of instrumental design. Variety, however, is *one* of the objects of orchestration. In the old-style scoring this was applied rigidly to variety in the treatment of the same music, when it appeared more than once in a symphonic work. A tune, when it first put its nose above ground, would find the oboe waiting to snap it up. Later on the violins would pounce down on it. And a surprising degree of merit was attached to this sort of orchestral chivy-chasing; quite regardless of the fact that, if the musical mood was the same, one or other of the two instrumentations was the better.

Nowadays less merit is allowed to these simple acts of substitution. The virtue of making the right choice in the first instance is still as much a virtue as ever it was. But the modern call for orchestral variety is directed in a larger way to securing differences of colour and mass in order to emphasize differences in the musical material. This is less attainable in choral orchestration than in symphonic. But if it is to be attained, the music must be looked at with a wide perspective; instruments that do not help the passage under consideration must be rigorously excluded, even though "good parts" might easily be provided for them; and a fair amount of subsidiary writing must be undertaken. One may add that this presumes an efficient modern technique on the part of the players, and—not less important—considerable earnestness in carrying out the composer's intentions.

84 85 86 87 88 89 *Andante.*

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

p *mf* *f* *f* *f* *f*

tr *tr* *tr* *tr*

Andante.

p *p* *p* *p*

CHORAL ORCHESTRATION

90 91 92 93 94 95

took - est up - on Thee to de - liv - er man, Thou didst hum - ble Thy - self to be
Thou didst not ab - hor the

No one, I presume, will quarrel with the scoring of bars 89 to 97. The voice-part is marked "solo" simply. And therefore it is not quite clear whether a solo for a single voice or for the choral basses is intended. The doubt will scarcely affect our judgment. Looking ahead we see four-part chorus *mf* in front of us at bar 97; then comes a general feeling of *crescendo* and forward movement, leading up to a streak of sound (bar 106) with an *ad lib.* top A for the sopranos. The experienced orchestrator might even write-in his streak of brass lightning on this bar without further thought:

Brass

These general considerations would make the choice of strings for bars 89 to 97 inevitable. But, apart from them, the literary subject and its musical treatment call for the utmost delicacy and sweetness in the orchestra. So we make it string-quartet, carefully slurring the phrases to insure a maximum of smoothness in the ensemble. The basses are omitted. They *might be* used. And, if so, would play the written notes of the cello-part, sounding an octave lower. There is a temptation here to write them a *pizz* part, while the cellos are playing *legato* with the bow. It would undoubtedly be effective. But on the whole the solemnity of the subject seems to indicate that we can do without them, whether *pizz* or *arco*. The mingled smoothness and austerity of the cello G-string will give us all that we need here.

	90	91	92	93	94	95
Fls. 1						
Fls. 2						
Obs. 1						
Obs. 2						
Clars. 1						
Clars. 2						
Fags. 1						
Fags. 2						
Hrns.						
Tpts.						
Tbns. 1						
Tbns. 2						
Tbns. 3						
Timp.						
Violins						
Violas						
Cellos						
Basses						

CHORAL ORCHESTRATION

96 97 98 99 100 101

Full *mf* *f con moto*

born of a Vir - gin. When Thou hadst o-ver-come the sharp - ness of death, Thou didst
Vir - gin's womb.

Full *mf* *f* *f con moto*

Before we go any further, however, we may cast our eyes forward and see where the basses are to re-enter. Something will have to be added to the strings on the last beat of bar 97. But let us make that "something" the least possible—say, an increase from *p* to *mf*, with the addition of a wood-wind quartet (clarinets and bassoons) to our four string-parts. Four bars later (last beat of bar 101) something still more will have to be added. As we do not wish to anticipate our streak of brass lightning in bar 106, we had better bring in our basses and horns here. This is not a very great addition of orchestral strength. But we do not want a very great addition. And we can make its presence quite perceptible by simultaneously jumping the first violins into their upper octave, and at the same time increasing the pungency of the wood-wind by introducing the oboes and flutes.

96

97

98

99

100

101

Con Moto.

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

Con Moto.

CHORAL ORCHESTRATION

102 103 104 105 106 107

Note here in the bars that follow (102 to 109) one small point of orchestral routine. When the first and second violins are playing in octaves it is always possible to make the latter lead, so to speak, a double life, playing the melodic line as the upper part of their chords and a second (harmonic) line as the lower. Even in the very flat and sharp keys one can generally write easy double-stopping for them, especially if one is always alive to the fact that the viola can often help the second violin out with notes that the latter's compass or technique puts out of his reach—and *vice versa*. The effect of internal string-harmony, where there is no melodic intention, is precisely the same to the ear, however the notes are obtained. In pure four-part writing it is, of course, neither desirable nor necessary. But elsewhere—as, for example, in the bars that we are considering—it is common; so much so that one may say that in orchestral circles the double life is quite respectable.

[illegible]

CHORAL ORCHESTRATION

108 109 110 111 112 113

liev - ers. Thou..... sit - test at the right hand of God, in the

We now come to a passage that is rather awkward to deal with successfully. Of all the passages in the work its orchestral interpretation is the least obvious. It begins at bar 110, and continues to the first beat of bar 119. Let us first notice that it is marked *ff*, and that therefore it would probably be played on the organ with a considerable increase in the registration. On the other hand, in view of what has gone before and what is coming, we do not want to attack the passage immediately with six- or seven-part chords in the brass. The first two bars of this passage can be made a three-part affair for the two trumpets and the first horn, while two of the trombones, assisted by the basses and bassoons, play the octave C's. But, if we adopt this somewhat "up in the air" treatment, it will be as well to make a virtue of our difficulties, and rise still higher into the orchestral atmosphere, attacking the phrase in the strings with a three-octave combination pitched as high as circumstances will allow. This, in fact, we have done. The three-octave combination includes the first violins, the violas, and the cellos; but excludes the second violins, which play a harmonic part. The rest of the score is subsidiary. The first flute plays with the first violins; the clarinets with the trumpets. The second flute and the oboes, like the second violins, fill in the harmony. Observe the drum, which counts for something here. In the next two bars (112 and 113) the scoring is more normal. The heavy brass gives the horns time to fill their lungs; and the horns repay the courtesies at the end of the phrase (bar 113). The second violins lead a double life, as mentioned above.

108 109 110 111 112 113

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

mf *f* *tr* *ff*

45

CHORAL ORCHESTRATION

114 115 116 117 118 119 *p*

Glo - ry of... the Fa - ther,..... We be-

Solo Stop

It will be noticed that, at bar 110, the first trumpet attacks the tune in unison with the first clarinet and the violas; and continues it as far as the second beat of bar 113. There it stops. It might proceed in any one of three ways:

1. By playing the secondary tune; that is, the movement, as given in the right hand of the organ-part. If it did that, it would necessarily have to play the upper series of notes. As the latter are written, they lie too high for the trumpet, and would be liable to sound too prominent. In order to keep them subsidiary to the main theme in the chorus, we should have to put them down an octave, so that the first trumpet part from bar 114 to bar 119 would be a suboctave-reduplication of the first oboe part. This passage does not lie well at all. In the upper octave it is far too high; in the lower it is too low, and would be lost among the trombone notes.
2. The trumpet might play in unison with the sopranos, continuing the tune in fact for the whole eight bars, instead of for only four.
3. It might play the lowish *tenuto* part, as printed on the opposite page.

No. 1, is practically out of the question. The choice is between Nos. 2 and 3. And as No. 3 gives the secondary tune a somewhat better chance of standing-out, it is adopted here. The subordinate movement is then entrusted to the first and second violins in octaves, reduplicated and supplemented harmonically by the flutes, oboes, and clarinets.

114 115 116 117 118 119 *loco*

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp. *tr* *mf*

p *loco*

CHORAL ORCHESTRATION

The musical score displays measures 120 through 125. The vocal parts (Soprano, Alto, Tenor, Bass) are written on a grand staff with lyrics underneath. The piano accompaniment is shown on a grand staff below the vocal parts. The lyrics are: -lieve that Thou shalt come to be our.

At bar 119 we reach a modulatory passage which is technically no more than a preparation for the E-flat unaccompanied chorus to come. The extreme solemnity of the words, however, and the character of the music make a change in the orchestration imperative. What are we to give the composer in exchange for his direction "Solo stop"? If the chorus were not singing, we might carry out his wishes almost literally by using a solo oboe accompanied by the string-quartet, or by giving the actual written notes of his melody to first and second violins in unison, with clarinets, bassoons, and horns to support them. However, neither of these plans would be quite satisfactory here. What we need for our harmony is a tone-colour sufficiently warm and vibrant to add interest to a rather simple choral unison, and at the same time moderate enough in quality not to obscure the smooth melody above. Perhaps the best way to get this is to write the harmony on violas and cellos *divisi*, keeping the latter well up on their top strings. If we give the violas the second and fourth parts of this four-part ensemble, they will be able to play the whole passage easily in double-stopping. The treatment of the melody—flutes and violins, both in octaves, with one oboe and one clarinet added to the lower part—speaks for itself. It might be a possible improvement to omit the first flute and the first violins entirely from bars 124 to 127. The four notes for horns in bars 122 and 123 will not, of course, come out very clearly against the same notes in the choral tenors and basses. Nevertheless their solemn warning character exactly suits the mood of the passage. So we shall retain them, and even repeat them two bars later. Finally, before leaving these eight bars, the reader should examine their phrasing, as it happens to exhibit, with almost mathematical regularity, the instrumental differences which are common on nearly every page of a full-score.

120 121 122 123 124 125

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

p

p

p

div.

p

p

p

p

49

CHORAL ORCHESTRATION

126 127 128 129 130 131

Semi-Chœurs
Andante. (not too slow.)

poco rit. Judge.... *p* We there-fore pray Thee, help Thy ser-vants,
poco rit. *p*
Andante.
Organ ad lib.

The chorus now (bar 128) is singing unaccompanied, with an organ-part marked "*ad lib.*" All we have to do therefore is to put rests in our string-parts, and "cue" the S. A. T. B. into the violins, violas, and cellos. We write small pin-head notes, and leave the vocal phrasing as it is.

This matter of "cueing" was mentioned before, when we were discussing the musical merits and demerits of the lead-pencil (page 6). The business of cueing, however, has been developed into an elaborate orchestral technique, far beyond anything in these very simple choral pages. A little more space, therefore, may be devoted to the subject.

Cueing, then, is a system beloved by the publisher and much practised by the professional orchestrator. Its object is to provide instrumental alternatives to any and every bit of melody and accompaniment. And this provision has to be made, not because the orchestrator cannot make up his mind, but because the instrument of his choice may not be on hand, and the purchaser of the parts demands the assurance that the work will sound well, whatever his instrumental forces may be. In fact, he asks for perfection—and at a very low price. For example, the orchestrator may have assigned a fragment of melody to that almost unheard-of instrument, the oboe. But there may be no oboe present. The part has to be cued-in to the clarinet. But there may be no clarinet present. The part has to be cued-in to the violin. What happens if there is no violin I do not know. I presume that then the word "orchestra" becomes interchangeable with the word "pianist." This happily illustrates the schoolboy's definition of an optimist as "a man who looks on the bright side of things, while one who looks on the dark side is called a pianist."

Bad as this system is fundamentally from the artistic point of view, its results are often surprisingly good. But it needs, for its successful operation, long experience, a cunning hand, and an amount of patience that, in any other walk of life, would seat its owner high up on the pinnacles of prosperity. Its painful feature is to be found in the tonal callousness which it *sometimes* produces in the mind of the orchestrator, forced as he is to regard all sounds of equal pitch as having equal orchestral value. The result of these accumulated uncertainties is often a stereotyped style that regards music chiefly from the chinese puzzle point of view.

126 127 128 *Andante.* 129 130 131

Fls.
 1 *poco rit.*
 2 *poco rit.*

Obs.
 1 *poco rit.*
 2

Clars.
 1 *poco rit.*
 2

Fags.
 1
 2

Hrns.
p poco rit.

Tpts.

Tbns.
 1
 2
 3

Timp.

Andante.
Voices
p
Voices
p
Voices
p
Voices
p

poco rit.

CHORAL ORCHESTRATION

132 133 134 135 136 137

whom Thou hast re-deemed with Thy pre-cious blood. Make them to be numbered with Thy

There are two main facts to keep in mind when cueing-in orchestral parts. First there is what I may call the "scale of probable presence" of the various instruments. Unfortunately on this point publishers are by no means at one, except with regard to their own individual catalogues. However, they are all agreed as to the rarity of oboes, bassoons, and violas; and the comparative abundance of pianos, drums, violins, cellos, cornets, trombones, and even flutes and clarinets. The second fact is the undeniable axiom that if an instrument is playing one set of notes at a given moment, it cannot also be playing another set at the same time. The importance of this general statement lies in its application. That, however, does not forbid the occasional writing of the true part and of the cued-in part on the same staff. Indeed in first violin parts this is normal; and many orchestrators contrive a special two-staff violin-part which gives the leading violinist a pleasant and continuous survey over the whole musical field, as well as the opportunity of unlimited activity during a performance.

The technique of cueing-in is remarkably simple. The first-choice notes are written large: the others—second, third, fourth, and so on—small. Above the second-choice notes the name of the first instrument is placed: above the third-choice notes the name of the second, *ad infinitum*. Were this not done—that is to say, if the name of the first-choice instrument were placed above the parts of all his less-favoured brethren—the latter would all play the passage in the prodigal son's absence. In a word, the following tabloid-score means: First-choice, clarinet; in default of clarinet, viola; in default of both, horn.

Clar. in A

(Viola)

Horn in F

(Clarinet)

Viola

132

133

134

135

136

137

132 133 134 135 136 137

Fls.
1
2

Obs.
1
2

Clars.
1
2

Fags.
1
2

Hrns.

Tpts.

Tbns.
1
2
3

Timp.

53

CHORAL ORCHESTRATION

138 139 140 141 142 143

Saints, in glo-ry ev-er last-ing. O Lord save Thy peo-ple, and

Organ

The above few paragraphs will give the reader a rough working idea of what the cueing-in system is. But, in order to see it in full flower, he should examine some of the modern commercial arrangements of popular music. The stunted growth of our own cueing-in ends at bar 141 of the *Te Deum*. One's natural tendency would be to let the violins steal in *pp* in that bar. But we had better look forward. Bar 146 brings us to an energetic phrase marked "Gt. *ff*"; then we have two bars (150 and 151) of a distinctly *crescendo*-like character, followed by an undoubted orchestral climax at the change of key. Finally, at bar 155, there is a bold soaring melodic passage which must be treated in the grand style. All this presumes a good deal of brass. Yet we do not wish to use more than is necessary.

Let us work backwards. The tune at bar 155 can be painted-in in strong colours over a background of trombones *p*. We *must* have a full brass chord *f* at the down-beat of bar 152. But the pitch of the two preceding bars suggests the omission of trombones and basses. The least we can do with our two two-bar phrases (bars 146 to 149) is to use a smallish orchestra *f* with as little heavy brass as possible *mf*. That practically makes it necessary for us to begin, after the unaccompanied chorus, with strings *mp* and horns *p*. But we shall treat the whole of these eleven bars (141 to 154) as economically as possible. Here, then, is our scheme:

1. Strings and horns (141 to 145)
2. Small orchestra *f*, with some brass *mf* (146 to 149)
3. *Crescendo* in the higher register (150 and 151)
4. Orchestral *forte* at the change of key (152 to 154)
5. Tune in octaves *f*, with trombone *tenuto p* (155 to 164)

138

139

140

141

142

143

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

CHORAL ORCHESTRATION

144 145 146 *ff* Full 147 148 149

bless Thine her - it - age. Gov - ern them, gov - ern them,

ff

Gt. *ff*

We now proceed to study this scheme in detail. Nothing need be said about bars 141 to 145. In the next four bars the rhythmical subject is in the upper strings *f* in unison with two clarinets and an oboe. The brass *mf* is in close harmony and is kept low. If we had four horns at our disposal, we should probably use them here *f*. However, as we have not, we use the heavy brass. In its pauses the marcato of the pedal-part are given to bassoons, cellos, and basses, plus one horn and the violas—note the addition of the two last-named.

144

145

146

147

148

149

Fls.

Obs.

Clarr.

Fags.

Hrns.

Tpta.

Tbns.

Timp.

Musical score for measures 144 through 149. The score is arranged in three systems. The first system includes Flutes (Fls.), Oboes (Obs.), Clarinets (Clarr.), and Bassoons (Fags.). The second system includes Horns (Hrns.), Trumpets (Tpta.), Trombones (Tbns.), and Timpani (Timp.). The third system is a grand staff for strings. The key signature is B-flat major (two flats). The time signature is 4/4. The score includes various musical notations such as notes, rests, dynamics (f, mf, arco), and articulation marks (accents, staccato). The woodwinds and strings play a melodic line, while the brass instruments provide harmonic support. The timpani plays a rhythmic pattern.

f

57

CHORAL ORCHESTRATION

150 151 152 153 154 155

gov-ern them and lift them up for ev - er, for ev - er. Day by

The *crescendo* bars (150 to 151) poised as they are in the upper air, come out with a sort of surging vigour. Here the E- and A-strings have an opportunity to assert themselves; while the wind is all well paced for this sort of effect. If we group the notes of bar 151 together on a single staff for purposes of easy inspection, thus,

Wood-wind Strings Brass

we cannot fail to observe that, though this is—and sounds like—a very high chord, the actual thickening is *downwards*. Between the two fiddle E's there is nothing but wood-wind, not a twentieth part of the orchestral tone-mass in this particular bar. The orchestral *forte* at bar 152 does not call for any particular comment—its main effect is gained by means of the six-part brass-chord on the down-beat—but the treatment of the tune three bars later does. Here we have a broad melody, a solid harmonic accompaniment, and our tantalizing old acquaintance the moving pedal-bass. The tune is quite satisfactory as an octave-combination of first violins and oboe plus cellos, horn, and bassoon, all marked *f*.

[illegible]

CHORAL ORCHESTRATION

The trombone *tenuto* is also satisfactory in itself. But it cannot be marked any higher than *p*; otherwise the tune would be swamped. Well, why not leave it *p*? We intend to do so; but if the reader will turn to the organ-copy, he will see that bars 155 to 164 are practically one big choral unison, apparently intended to be sung *ff* or *f* from beginning to end. Had the choral parts been in harmony throughout, our three trombones *p* might have been enough to steady and enrich the choral mass. But with one part continually brought forward so prominently, they certainly are not enough. We are compelled to use our violas and second bassoon (little enough I may say) to help our marching basses. The result is that, in order to get the necessary harmonic support here, we have to appropriate whatever other instruments we can lay hands on—second violins, flutes, a clarinet, etc.—always obsessed by the fear that our tune may be blotted out. This kind of rather muddled scoring is inevitable in our circumstances. To make the passage sound really clear and distinguished from the vocal-instrumental point of view we should require at least the following forces—

- Tune: Upper octave, first and second violins, two oboes, and one clarinet; lower octave, violas, cellos, cor anglais, and one clarinet.
- Harmony: Four horns and three trombones
- Bass: Upper octave, two bassoons, and bass-clarinet; lower octave, basses, and double-bassoon.

156 157 158 159 160 161

Fls.
1
2

Obs.
1
2

Clars.
1
2

Fags.
1
2

Hrns.

Tpts.

Tbns.
1
2
3

Timp.

The musical score is arranged in a system with measures 156 through 161. The instruments are listed on the left: Flutes (Fls.), Oboes (Obs.), Clarinets (Clars.), Bassoons (Fags.), Horns (Hrns.), Trumpets (Tpts.), Trombones (Tbns.), and Timpani (Timp.). The score includes various musical notations such as notes, rests, and dynamics like 'mp' (mezzo-piano). The key signature is one sharp (F#), and the time signature is 4/4. The bottom section of the page shows the continuation of the score for measures 156-161, including the piano and bass staves.

CHORAL ORCHESTRATION

162 163 164 165 166 167

Semi-Chorus

out end..... Vouch - safe, O Lord, to keep us this..

p *p* *p* *p* *p* *p*

p Organ *ad lib.*

We now arrive at our *diminuendo* bars (163 and 164), followed by our second cued-in chorus, bars 165 to 178. And here we may pause for a minute to consider a little question, simple enough in itself: but often the source of anxiety to beginners—the relative “placing” of the various instruments. I need scarcely say that with four horns (or trumpets, for that matter) the parts are always written dovetailed or interlocked. The third horn plays the harmony-note immediately under that of the first horn; then come the second and fourth horns, in that order downwards. In modern music this is an absolute necessity, as it specializes the leading players of each pair of horns to the accurate production of the difficult upper harmonics. On the rare occasions when one has four trumpets at one’s disposal, the same general scheme holds good. But it often happens that, even with four trumpets in the score, the upward spread of the trombones makes a three-part trumpet-chord more desirable. In this case either a trumpet is omitted or one of the parts is doubled. If a part is doubled, more often than not it will be the top part; so that the three parts downwards in the chord will be played by first and third trumpets in unison, second trumpet, fourth trumpet. But every chord must be looked at searchingly to determine exactly what is needed. Nothing upsets things so much in the orchestra as too much or too little sound in the trumpet department. Of course, at a big orchestral climax there is nothing to compare with four-part trumpet-chords in the top register. But a little of this goes a long way; and an audience is soon blinded musically.

162 163 164 165 166 167

Fls.
1
2

Obs.
1
2

Clars.
1
2

Fags.
1
2

Hrns.

Tpts.

Tbns.
1
2
3

Timp.

Voices

Voices

Voices

Voices

CHORAL ORCHESTRATION

168 169 170 171 172 173

day with - out.... sin. O.... Lord, have mer - cy up - on.. us, have

It is not, however, in the brass that the beginner will probably find his chief difficulties, but in the wood-wind. This question has often been asked: The oboes can be placed either above or below the clarinets; which is the correct way of writing them? Well, there are six ways of spacing, let us say, the ordinary chord of G major for oboes and clarinets, not two:

1 2 3 4 5 6

Oboes
Clara. in A

and each of these six sounds different from the rest. In most cases it is a matter of complete indifference orchestrally how they happen to be placed at any given moment. As a routine in filling up *tutti* chords the dovetailing system may be adopted (nos. 2 and 5). But this must be interpreted liberally. If no special effect is intended, the two arrangements (2 and 5) can be interchanged occasionally for the sake of interesting the players, who naturally see the music as a strictly horizontal affair at their own level. Next in order of usefulness come the two placings (nos. 3 and 4) where one of the pairs plays the outside parts. Nos. 1 and 6 are less used, but it would be absurd to say that they are not quite common. No. 6 in particular often has to be written in low-pitched chords, owing to the over-reedy quality and the limited compass of the oboes. The employment of *one* oboe to play a fragment of tune supported harmonically by two clarinets underneath is an orchestral commonplace. However, it is always charming, owing to its woody homogeneity and its pointed melodic appeal. Before leaving this subject let me repeat the statement that the six arrangements given above all sound different *if they can be heard*. A nice discrimination in their use is therefore a weapon in the hands of the orchestrator. The question of routine in a *tutti* is quite another matter. It may be added—though this is not altogether germane to the topic—that wood-wind unisons and octave-combinations are much more frequent in orchestration than in orchestration-books. In the latter, too, there is a hoary mediæval legend that perfect fourths on one tone-colour (nos. 1 and 6 above) plunge an audience into deep mental distress. I confess that, though I have often tried, I have never been able to feel unhappy on this subject. It seems to me to be a Hucbaldian hallucination which might well be allowed to perish.

	168	169	170	171	172	173
1 Fls.						
2 Fls.						
1 Obs.						
2 Obs.						
1 Clara.						
2 Clara.						
1 Fags.						
2 Fags.						
Hrns.						
Tpts.						
1 Tbps.						
2 Tbps.						
3 Tbps.						
Timp.						

CHORAL ORCHESTRATION

174 175 176 177 178 179

mer - cy up - on..... us. O Lord, let Thy mer - cy be..... up
light - en

Organ

This page is almost a "blank" as far as musical interest goes. In view of what I have said above, with regard to the "placing" of the wood-wind, I should therefore like to suggest an exercise, which, if it is to have any value, must be carried out slowly and conscientiously. Turn the pages of this score from beginning to end, looking only at the "placing" of the wood-wind parts. Note particularly those places where the first flute is merely an octave-reduplication of clarinet or oboe. Note also what the second flute is doing in these cases. Make a list of the few places where a third wood-wind instrument intervenes between these two octaves. In the "placing" of the chords underneath the suboctave tune, note precisely what arrangement and variation have been employed as between the oboes and the clarinets. Note the places where the bassoons are so far removed from the rest of the wood-wind as to be negligible as far as this investigation goes; note also the places where they are brought up into close harmonic contact with the other wood-wind instruments. Examine carefully bars 182 to 185.

After this has been done, and a good general idea of the wood-wind scheme has been obtained, look through the score again with an eye on the brass staves, remembering that they represent much more powerful sounds; and that they, not the wood-wind, will generally define both the melody and the harmony. Use this as an explanation to yourself of, for instance, the first oboe and first trumpet notes in bar 12, the second flute part almost throughout, etc.

The re-entry of the orchestra at bar 176 is managed very simply by means of strings and bassoons, with a little touch of colour for the flutes, answered lower down by the clarinets.

174 175 176 177 178 179

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

CHORAL ORCHESTRATION

180 181 182 183 184 185

on... us, as our trust... is in Thee. O

Gt. *p* *molto cresc.*

At the double-bar (182), however, the text, the change of key, and the character of the music give us an opportunity of doing something very nice in the orchestra. Our object is, of course, to enforce the words "our trust is in Thee" with a tone-colour that is placid, but yet has something of celestial aspiration in it. In order to secure this effect we omit the oboes, bassoons, and basses from the ensemble. We then put the violins (in three parts) into the upper octave; while the gap between them and the cellos is filled by a suboctave-reduplication of the violins on flutes and clarinets. The orchestra is marked *p*, but the horn-octaves that bind the whole thing together are marked *pp*. The reader should observe *exactly* what notes have been written in the wood-wind parts here. That is important; as the "doublings", here and elsewhere, have by no means been left to chance. The effect of this little passage is quite beautiful.

180 181 182 183 184 185

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

p *p* *p* *p* *p* *p*

f

mp *mp*

pp

div. *unis.*

CHORAL ORCHESTRATION

The musical score shows measures 186 through 191. The vocal line (top staff) has the lyrics: "Lord, in Thee, in Thee have I trust - ed. let me". The orchestration includes a piano (piano) and a brass section (brass). The piano part features a melodic line in the right hand and a harmonic accompaniment in the left hand. The brass part provides harmonic support with sustained chords and moving lines. Dynamics include *mf* (mezzo-forte) and *pp* (pianissimo).

Very little remains to be said with regard to the last moments of this score. The orchestral difficulty is that it dies in two ways; first of all *p* at bar 196, and then *ff* from bar 197 to bar 212. In its first version we cannot very well let its life flicker out without some orchestral consolation—especially as we have a direction "*Gt. p molto cresc*" in bar 185. On the other hand too much consolation may mean disappointment when the Festival Ending begins. What is the least required of us by dignity and friendship in these trying circumstances? I should say *mp* brass at bar 186 with a *crescendo* to *mf* five bars later; bar 190 to be the only big spread chord; then a drop back in the next bar to an orchestral *mf* without heavy brass; the last cadence to be helped out with *pp* trombones—no trumpets.

186

187

188

189

190

191

Fls.

Obs.

Clars.

Fags.

Hrns.

Tpta.

Tbns.

Timp.

This musical score page contains measures 186 through 191. The instrumentation includes Flutes (Fls.), Oboes (Obs.), Clarinets (Clars.), Bassoons (Fags.), Horns (Hrns.), Trumpets (Tpta.), Trombones (Tbns.), and Timpani (Timp.). The score is written for a full orchestra, with multiple staves for each instrument family. The key signature is one sharp (F#), and the time signature is 4/4. The dynamics range from *f* (forte) to *mf* (mezzo-forte). The woodwinds and strings play a melodic line, while the brass provides harmonic support. The timpani plays a rhythmic pattern. The score is divided into measures by vertical bar lines, and the measures are numbered at the top.

71

CHORAL ORCHESTRATION

192 193 194 195 196

nev - er, let me nev - er... be... con - found - ed.

The musical score consists of five measures, numbered 192 to 196. It features a vocal line with lyrics and a piano accompaniment. The vocal line is written in a single staff with a treble clef. The piano accompaniment is written in two staves, with a grand staff (treble and bass clefs) for the left hand and a single staff for the right hand. The lyrics are: "nev - er, let me nev - er... be... con - found - ed." The music is in a key of D major (indicated by two sharps) and 4/4 time. The tempo is marked "Allegro" (indicated by a '4' in a circle). The score includes various musical notations such as notes, rests, and dynamic markings.

The only points of minute detail in this short passage that may be recommended to the reader's attention are: (1) The melodic unison of first clarinet and first violins at bar 186; (2) The suboctave melodic unison of first oboe and first clarinet when the first violins continue the tune in the upper octave at bar 191; (3) The precise arrangement and spreading of the moving sixths in bar 194 as between wood-wind and horns.

192 193 194 195 196

Fls. 1 2

Obs. 1 2

Clars. 1 2

Fags. 1 2

Hrns.

Tpts.

Tbns. 1 2 3

Timp.

73

Detailed description of the musical score: The score is for measures 192 through 196. The key signature changes from one flat (Bb) to one sharp (F#) at measure 196. The time signature is common time (C). The instruments are arranged in a standard orchestral layout. The woodwinds (Flutes, Oboes, Clarinets, Bassoons) and strings (Horns, Trumpets, Trombones, Timpani) are all active in measures 192-195. In measure 196, the woodwinds and strings play sustained chords or single notes, while the brass (Horns, Trumpets, Trombones) plays a more active role. Dynamics are marked as p (piano) and pp (pianissimo) throughout the measures.

CHORAL ORCHESTRATION

Festival Ending.

197 198 199 200 201

Maestoso. *ff* *ff*

The "keynote" of the Festival Ending is solidity. All our forces will have to be marshalled and evenly distributed over the ground. There will be no resting for anybody but the drums, and in that department we shall for the first time use our blank line for bass-drum and cymbals. That is our general strategic plan. Furthermore, as both chorus and organ are marked *ff*, we shall transfer that marking to the orchestra. There will be no dynamic "saving up" for a rush at the end, except that we shall try to carry out the composer's evident wishes by giving him a high well-placed chord of C major at bar 211. As we have already hinted on page 34, we *might* use our strings here *tutti* in a three-octave combination to enforce the plump pedal-bass. But strongly against that plan is the fact that, down to the middle of bar 205, the chorus is singing in unison and not in harmony. Its unison moreover, on the accented beats, is practically identical with the moving-bass. We shall therefore do our best for the pedal-part with cellos and basses reinforced by bassoons and third trombone, regretting the absence of tuba and double-bassoon for the lower octave. We have to make up our mind here whether we are going to take our first flute and first violins right up to the top C at the end, an octave above the written note of the organ-part. There is no reason why we should not, and every reason why we should. The question then is: Are we to keep the first violins in the upper octave throughout these sixteen bars? On the whole it is better not. It makes the opening (bar 197) unnecessarily high, and also sounds over-insistent if continued too long. The latter point, however, is only of importance when the violins have nothing to play but *tenuto* notes, as here, instead of brilliant figures and passage-work. Our best plan then will be to leave bars 197 to 199 much as they were at the beginning of the *Te Deum*; to write the first violins from bars 200 to 205 in the lower octave, placing the flutes above them in order to add resonance to the *tutti*; and then, in the middle of bar 205 where the chorus begins to sing in harmony, to jump the first violins up an octave into unison with the first flute, and leave them so to the end.

Festival Ending to Te Deum Laudamus.

197 *Maestoso.* 198 199 200 201

Fls. 1 *ff* 2 *ff*

Obs. 1 *ff* 2 *ff*

Clara. 1 *ff* 2 *ff*

Faga. 1 *ff* 2 *ff*

Hrns. *ff*

Tpts. *ff*

Tbas. 1 *ff* 2 *ff* 3 *ff*

Timp. *ff* *tr.*

B. D. & Cymb. *Maestoso.* *f* *Both.*

CHORAL ORCHESTRATION

202 203 204 205 206

praise Thee, O God..... we ac-knowl-edge

These preliminary considerations practically exhaust the topic of the orchestration. When they are once decided, the rest is almost a stereotype. Bars 197 to 199 are nearly the same as bars 2 to 4, except that they are "capped" in bar 200 with a *f* stroke on bass-drum and cymbals, and that the cellos have a little A-string passage—unheard of course—as compensation in advance for their dull work to come. The place where the bass skips upwards in bar 202 is chosen arbitrarily. One's object is to suit the compass of the various instruments and to avoid as far as possible the toneless cavernous depths of the orchestra. The second bassoon *had* to jump when he reached his low B-flat. The cellos might have continued right down, as in the pedal-part. But if the basses had marched down with them, they would have been compelled to skip upwards on the second beat of bar 203. This would have given them a rather stupid repetition of the upper C on the second and third beats. Moreover the composer's octave-skip in this bar is a good one, and we wished to have all our comparatively small bass-force in position to make it. Before leaving this subject we may note that the introduced skip at bar 202 is intentionally blurred to the ear by being written one beat earlier in the trombone than in the bassoons and strings. At bar 207 the small notes in the organ-part obviously represent a sort of "trumpet effect." We transliterate it accordingly; though, with chorus and orchestra going full-blast, these particular few notes cannot be distinguished so easily when transferred from organ to orchestra. The bottom notes of the first trumpet in these bars (207 to 209) are helped out by the second trumpet and the horns.

202 203 204 205 206

8va

Fl.

1

2

Obs.

1

2

Clars.

1

2

Fags.

1

2

Hrns.

Tpts.

1

2

3

Tbas.

1

2

3

Timp.

B. D. & Cymb.

8va

This musical score page contains measures 202 through 206. The instruments are arranged in the following order from top to bottom: Flute (1 and 2), Oboe (1 and 2), Clarinet (1 and 2), Bassoon (1 and 2), Horn (1 and 2), Trumpet (1 and 2), Trombone (1, 2, and 3), Timpani, and Bass Drum & Cymbal. The key signature has one sharp (F#). The score includes various musical notations such as notes, rests, and dynamic markings like 'f' (forte). A '8va' (octave) marking is present at the top and bottom of the page, indicating that the first and last staves are to be played an octave higher than written. The measures are divided by vertical bar lines, and the page number '77' is centered at the bottom.

CHORAL ORCHESTRATION

207 208 209 210 211 212

Thee..... to be the..... Lord....

The musical score shows six staves. The top two staves are for the vocal choir, with lyrics 'Thee..... to be the..... Lord....' written below. The bottom four staves are for the orchestra, with various instrumental parts including woodwinds, strings, and brass. The score is in common time and features a variety of note values and rests.

One word with regard to the *ad libitum* part for bass-drum and cymbals. The beginner may not think so, but there are rather too many than too few notes in the part. However, as the Festival Ending is meant to thrust its head triumphantly in the air, they may be left as they are. In bar 210 a seventh has been added to the orchestration (second flute, second clarinet, and first trombone). This is allowable, as it appears in the chorus. Its omission from the organ-part may be a misprint or an oversight. The actual final chord of the whole work (bar 211) is "placed" for extreme brilliance. From the "placing" of the choral parts this is apparently the composer's intention. The brass in the orchestra practically reduplicates the chorus with the addition of the two missing notes of their chord. But all the brass notes are written in what may be called a "position of maximum efficiency." Here are the three sets of notes, wood-wind, strings, and brass, side-by-side:

Wood-wind Strings Brass

The diagram shows three staves of music, each representing a different section of the orchestra: Wood-wind, Strings, and Brass. The Wood-wind staff has a treble clef and a key signature of one flat. The Strings staff has a bass clef. The Brass staff has a bass clef. The notes are arranged in a way that shows the relative positions of the instruments in the orchestra.

207 208 209 210 211 212

Fla.
1
2

Obs.
1
2

Clars.
1
2

Fags.
1
2

Hrns.

Tpts.

Tbns.
1
2
3

Timp.
tr
f

B. D. & Cymb.
f

C. F.

CHORAL ORCHESTRATION

As we have now completed the scoring of the *Te Deum*, let us cast a Parthian glance backwards over the work and its orchestration. In a general way it may be admitted as a solid work that needs solid forceful treatment. So far as that goes, it is an excellent example on which the student can build. It provides him with the material for making those "broad decisions" of which I spoke at the beginning of this volume, and also with the detailed "dog-work" which is necessary to carry out those decisions. The scoring, if anything, is a little bit on the emphatic side. But the total effect in performance is rich, robust, and brilliant where it is meant to be so. These qualities, though not the subtlest in the world, are worth keeping in mind when dealing with the chorus. For the attitude of the chorus is often one of vigour and determination. And, when this is so, its junction with a poor threadbare orchestral ensemble is miserably ineffective. True, the chorus will be heard better, the less we put into the orchestra. It will also be heard better still with no orchestra at all. But, not to split hairs on this matter, one is throwing away one's sharpest weapon, unless one regards the two forces, the vocal and the instrumental, as a *fusion*, out of which may come a metal stronger and finer than either of its component parts.

That does not mean necessarily that one is to be constantly on the lookout for orchestral "effects"; though even that seems to me to be preferable to the more common custom of pinning the first violins down to soprano parts on their A-strings. One must be ready for anything, according to the character of the music—loud and soft, high and low, bright lights, half tones, and shadows. The orchestra can face all these problems and solve them. But their solution must be in terms of the orchestra plus the chorus, not in terms of the orchestra alone.

And here it is well to remember one fact. The chorus so often makes its final appeal by means of an overwhelming mass of sound that we are apt to forget that, as far as dynamic range goes, it leaves every department of the orchestra far behind. At one moment it may be nearly lifting the roof off a concert-hall with its mighty shout. At the next, perhaps only altered in pitch by the interval of a fifth, it may be whispering so tonelessly that a *mezzopiano pizzicato* in the orchestra sounds to the audience almost shockingly loud. And between these two limits there are a dozen others; there are endless distinctions of shading and expression; there are all the manifold differences that come from variations in the spread and placing of the parts.

Naturally we cannot expect all these fine things in a single setting of the *Te Deum*. This *Te Deum*, in particular, has no striking example of solo accompaniment; nor of fugal writing; nor of what may be called the pitting of the orchestra against the chorus. Each of these styles offers problems and opportunities to the orchestrator. So that a few more pages may well be devoted to their consideration.

It is difficult to lay down *any* precise rules as to solo accompaniment. Obvious generalities—such as the fact that contraltos are not well heard against a *ff* background of brass, or that a dapper little passage for strings will not blot out the high notes of a soprano—are scarcely worth putting on paper. The modern orchestra, with its marvellous *pianissimos*, makes one hesitate before trying to embody its laws in a new set of musical commandments. Almost everything, one may say, is possible; provided the composer has an understanding of the wonderful instrument that he is employing—the human voice.

From individual singers little, I fear, is to be gleaned on this general topic. For two artists, almost identical in vocal strength and in the power of sustaining the pitch, will express diametrically opposed views on the subject; one calling for constant orchestral support with brass at every climax and semi-climax, the other rejoicing to stand before the audience almost unclad harmonically. It would be a great deal more than surprising if singers were to be found to agree about *anything*; indeed such an extraordinary state of affairs would probably foreshadow the end of the vocal art. Therefore the discovery, or supposed discovery, of any such agreement should certainly be put on record. As I

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understand, or think I understand, them, they all dislike harmonic or contrapuntal movement in the neighbourhood of their voice or above it. Not mere backgrounds, let it be understood, nor melodic octave-combinations; but actual movement, harmonic or contrapuntal. Even those singers who are loudest in their call for orchestral support are keenly resentful if the buttress is carried too far up the tower from which they are singing.

Good modern singers, however, are quite well aware that music cannot always observe these restrictions. They are necessarily great specialists in the psychological study of mass-emotion. (This is a polite way of putting it.) They have no difficulty, therefore, in "sensing" the effect on an audience of the modern orchestra, with its big brass passages, its spread *tutti*s, and its terrific violin-onslaughts in the top octave. They do not desire to shirk their part in these orgies of sound. But they do ask—and very naturally—two things for the sake of their voices: first, that their parts shall not be all climax from beginning to end; and second, that when the climax does come, the composer shall take as much trouble in writing the most effective notes for them as he does in the placing and grouping of his orchestral instruments. Only by doing this can the composer avoid stultifying himself. But it presumes a good deal of study and observation on his part, both of which have to be undertaken in the theatre and the concert-hall, not at his desk. It is really astonishing how ignorant many clever men are on this point. So much so that one might almost classify composers according as they like or dislike singing.

This is, however, a little bit removed from our main topic. Most singers of experience will say that the only people in the orchestra of whom they are afraid are the wood-wind. As a matter of hard scientific fact, the only orchestral instruments that have the same tone-producing mechanism as the singers—that is to say, the vibrating double-reed—are the oboes and bassoons. Hard scientific fact, however, though a good guide towards the promised land of music, is a poor camp-master when we arrive there. We may therefore accept the singers' *general* statement as true. And I would add to the caution in two particular ways. First with regard to the upper wood-wind, and especially the flutes when they are actually pitched above the voice. This tone-colour, though not of great importance in the orchestral ensemble, is terribly hard to struggle against vocally. It sets adrift a sort of orchestral fog round the singer's notes. The reason is certainly not to be sought in the fact that the mind is drawn away from the vocal-line to whatever sound happens to be uppermost at the moment. There are many good arguments against that view. More probably the fog is caused by the unhappy prominence of upper-partials which are useless or noxious, not to the chord of which they are a part, but to the individual note which the voice is singing. This is made the more likely by the fact that the wood-wind are much more congenial to baritones and basses than to sopranos and contraltos. Indeed it has often been noticed that, if a *basso profundo* is singing the true bass of a chord, the addition of the upper-partials on the wood-wind adds enormously to his bassic profundity. But, of course, if music had to be written with a text-book of acoustics open on the piano, it would not be written at all. At any rate, it is an undeniable fact that, when an injudicious vocal accompaniment has to be lightened for public performance, nine times out of ten the best way of doing so is, not by cutting out the horns and trombones, but by blue-pencilling the flutes and oboes.

The second caution is founded on a fact which was, I believe, originally pointed out by Professor Corder—the fact that the dynamic temperature (maximum and minimum) of the wood-wind instruments is inside that of the other orchestral groups. If they blow hot you won't be scorched; and if they blow cold, you run no risk of freezing. I am not concerned here with the maximum side of the comparison, as orchestral noise is always an easily purchased commodity. But the minimum side is of particular importance to the matter in hand. It comes to this: that sixteen good fiddlers can shade down a note through all the degrees of *p*, *pp*, and so on, until it sounds no louder than the last breath of a butterfly. But set the same task to sixteen flautists, or oboists, or clarinetists, and see

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the result! There will indeed be a *diminuendo*. But, long before the "butterfly's breath" stage is reached, the vibrations will refuse to be further reduced in amplitude by the lips of the players. The choice then is either to play no softer or to stop playing altogether. And even if you divide sixteen by sixteen and make the answer "one," the remaining player has no chance in this particular competition against his brethren of the string.

Hence for purposes of accompaniment, incidental obbligatos, and so on, one has to face the fact that the wood-wind are not only similar to the voice in their tone-colour, but also are never reducible, as the strings are, to vanishing point. They always remain something more of a "fact." They *are* playing or they *are not*. But there is none of that delicious border-country which leads one from the workaday world to fairyland.

In the brass department these cautions are scarcely necessary—the dangers of over-emphasis are so obvious when accompanying a solo voice. Not that the brass, alone or in combination, cannot be used occasionally with perfect safety. In the theatre particularly, that method of accompaniment has been a commonplace since Mozart's time. But it needs a special character in the music; and, if it is to sound *p*, a specially low-placing. The treatment of the brass in the *Te Deum* must by no means be accepted as normal. The intention of the work is loud and jubilant. It gives no opportunity at all for any of those mysterious low-pitched *tenutos* or those sudden unexpected outflarings which are to be found in some modern music. As the brass is treated in the foregoing pages, it is effective for its particular purpose, that of solid choral support. But it has many other uses, running through the whole musical gamut from the light *pizzicato* style of comic opera to the tremendous harmonic passages and melodic unisons of tragic music-drama. One last word about the brass: in the brassiest work ever written the majority of the bars in the brass-parts are silent bars. And in the *average* work two-thirds of the brass playing is *p* and *mp*. Were that not so, it would mean that the composer was throwing away one of the strongest weapons in his armoury, the power of *crescendo* from the heavy brass. Occasionally, it is true, in opera one finds long scenes in which the brass pumps away *f* and *ff* from beginning to end. I do not know who enjoys these scenes. The players certainly do not. Nor does the wretched audience. And as for the singers, it reduces them to the level of a lot of animated dolls, gesticulating, open-mouthed—and silent.

However, it is to the strings that the largest share in the vocal accompanying must fall, the strings either used alone as the whole body-musical, or in combination with other tone-colours as the spinal column thereof. This is but natural. Their sound is so beautiful in itself that one never tires of it. In flexibility, dynamic range, and especially variety (to be secured by phrasing and bowing), they are in a class by themselves. Finally it must not be forgotten that the voice is a wind-instrument and they are not. These are almost musical truisms; but, as Edward FitzGerald said about the common chords "like other truisms so little understood in the full."

One word of caution may be added here for the benefit of those who are not as familiar as they might be with string-quartet writing. String-parts often *look* remarkably thin as compared with the serried masses of notes in the brass and wood-wind departments. The beginner is therefore tempted to think that it would be better *and safer* if he filled up all his chords with *divisis* and double-stoppings. Now, the string *divisi* has been a legitimate orchestral effect ever since the days of *Lohengrin*. For its special purpose in the high, middle, and occasionally even low registers nothing can be more exquisite. But it is precisely that—a *special purpose* tool, involving the subtraction of half your players for each additional part that you write. Double-stopping, again, is a very useful and necessary portion of the orchestral routine. In the second violins and violas especially it has to be used continually, sometimes as mere padding, but more often with the object of including notes that are vital to the harmony. And this leads us back to our original theme: that if the part-writing in the strings is contrapuntally and harmonically correct, the constant addition on every chance chord of *divisis* and double-stoppings not only does not

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help matters, but takes away the elegance and distinction of the music, and substitutes for it indistinction and muddle.

We now come to the topic of fugal accompaniment, not so much in its full-dress aspect—for that is too vast a subject—as in its easy modern undress, the fugato. Here the beginner's difficulty always is that he fears that he is not doing as much with his orchestra as he might. On the other hand he feels in his bones that fugal writing is fugal writing, and that the addition of any of the thickening-sauces from the modern orchestral recipe-book is pure musical blasphemy. What is he to do then with his big score-paper?

Well, the answer is very simple. His musical instinct is sound. If a fugue or a fugato cannot make its proper appeal to the audience by means of its contrapuntal parts, then it is not worth writing. There is only one way of scoring it: by doubling the vocal parts in the orchestra, distributing them solely according to the pitch and force required, with only the occasional license of an octave-doubling at discretion in the outside parts. Elementary as this sounds, if he will try to put it in practice once or twice, he will see that it gives him ample opportunity for orchestral planning on a large scale, even of dynamic-engineering.

If he is afraid that this is "going back to Handel," he may be reminded that on this matter—contrapuntal expression—Handel had a particularly forceful mind; and also that he was by no means a fool on the subject of public performance. Strictly, however, it does not mean going back to Handel, but going back to Handel plus all the nineteenth century improvements in the mechanism of the wind-instruments. One must not forget that, in Handel's day, even such a simple procedure as doubling a tenor-lead by four horns in unison was practically out of the question. No doubt, had the nineteenth century instrument-makers preceded Handel, we should have records of fine noisy doings at Marylebone Gardens.

The last of the three topics mentioned above is that which, for want of a better name, I have called the "pitting of the orchestra against the chorus." By these words I do not refer to that type of musical expression in which the two are used antiphonally. Such passages, when conceived with boldness and simplicity, seem to respond to something abiding and fundamental in our nature. But their technical treatment is generally fairly obvious. We only need to ascertain the psychological candle-power, so to speak, of the chorus, and then to answer it with our own lamp—whether it be the lamp of night, of light, or of the half light.

These musical equations, important in themselves and wonderful in their effect on the human mind, do not call for any comment here. But when we come to the vocal-instrumental combination, in which the instrumental half is asked to speak aloud and to say something intelligible while his partner is talking, then all sorts of difficulties begin to crop up. This is not a question of any mere decorative whigmaleeries, but of additional musical structure which *is* in the orchestra and *is not* in the chorus. Musically it may be anything. A single note, held as a pedal in the bass, tenor, or treble, might come under this heading. It might be an orchestral unison against a group of choral chords, or a group of orchestral chords against a choral unison. It might be a persistent figure, an elaborately worked *ostinato* which requires instrumental treatment for its proper expression. It might be a theme, incomplete in itself, and needing choral harmony for its completion. Finally it might be one of those instrumental organisms which preserve a semi-independent existence, acknowledging at the same time the sovereignty of their suzerain, the choral fugue.

These problems, to which many others might be added, are only sketched-in here to give the reader food for thought, food on which his imagination can flourish. But indeed the theme is endless. Had we any of the problems actually before us, it would be delightful to suggest solutions for them. But space forbids; for it would mean the printing of many more pages of full-score. This, however, can be said: that, whatever the vocal-

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instrumental problem, it must be solvable by study followed by experiment. And this method—analysis and synthesis, if one pleases to put it so—is exactly the plan that has been pursued time-out-of-mind in teaching the simpler subject of orchestration.

Let the reader then study the scores of the great masters with a cool mind. Let him afterwards visit the concert-hall with as much of the score in his head as he can carry, but with none of it in his hands to distract his attention from the music. In this way he will learn much from their successes. From their failures too he will be able to glean something, if he keeps his judgment sanely balanced as between the orchestral methods of the past and of the present.

Felix quem faciunt aliena pericula cautum
Happy the man made wary by the dangers of others.


A Festival Te Deum

*Written for the
Peace Celebrations of 1919*

by **WALTER HENRY HALL**

New York The H. W. GRAY CO., Sole Agents for NOVELLO & COMPANY, Limited London

Allegro Maestoso

SOPRANO  **We praise Thee, O**

ALTO  **We praise Thee, O**

TENOR  **We praise Thee, O**

BASS  **We praise Thee, O**

ORGAN 

 God, we ac - knowl - edge Thee to be the Lord.

 God, we ac - knowl - edge Thee to be the Lord.

 God, we ac - knowl - edge Thee to be the Lord.

 God, we ac - knowl - edge Thee to be the Lord.



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Four vocal staves (Soprano, Alto, Tenor, Bass) and a piano accompaniment. The lyrics are: "All the earth doth wor-ship Thee, the Fa - ther ev - er". The piano part consists of chords in the right hand and a single bass line in the left hand. Measure numbers 10, 11, 12, and 13 are indicated above the piano staff.

All the earth doth wor-ship Thee, the Fa - ther ev - er

All the earth doth wor-ship Thee, the Fa - ther ev - er

All the earth doth wor-ship Thee, the Fa - ther ev - er

All the earth doth wor-ship Thee, the Fa - ther ev - er

10 11 12 13

Four vocal staves and a piano accompaniment. The lyrics are: "last - ing. To Thee all An-gels cry a -". The piano part continues with chords in the right hand and a single bass line in the left hand. Measure numbers 14, 15, 16, and 17 are indicated above the piano staff.

last - ing. To Thee all An-gels cry a -

last - ing.

last - ing.

last - ing.

14 15 16 17

loud. To

the Heavens, and all the Powers there-in

18 19 20 21

This system contains measures 18 through 21. It features a vocal line with lyrics and a piano accompaniment. The lyrics are "loud. To" on the first line and "the Heavens, and all the Powers there-in" on the second line. The piano part consists of chords and single notes in both hands.

Thee Cher-u-bin and Ser - a - phin con - tin - ual-ly do

con - tin - ual-ly do

con - tin - ual-ly do

con - tin - ual-ly do

22 23 24 25

This system contains measures 22 through 25. The lyrics are "Thee Cher-u-bin and Ser - a - phin con - tin - ual-ly do" on the first line, and "con - tin - ual-ly do" on the subsequent three lines. The piano part continues with chords and single notes. Measure 25 features a melodic flourish in the right hand of the piano part.

Four vocal staves (Soprano, Alto, Tenor, Bass) and a piano accompaniment. The vocal parts are marked *ff* and sing: cry, Ho - ly, Ho - . The piano accompaniment starts at measure 26, marked *ff* *Gt.*, and continues through measure 29.

26 27 28 29

ff *Gt.*

Four vocal staves (Soprano, Alto, Tenor, Bass) and a piano accompaniment. The vocal parts sing: ly, Ho - ly Lord God of Sab-. The piano accompaniment continues from measure 30 through measure 33.

30 31 32 33

a - oth; Heaven — and earth are full — of the

a - oth; Heaven — and earth are full — of the

a - oth; Heaven — and earth are full — of the

a - oth; Heaven — and earth are full — of the

34 35 36 37

This block contains the first system of a musical score. It features four vocal staves (Soprano, Alto, Tenor, Bass) and a piano accompaniment. The lyrics are 'a - oth; Heaven — and earth are full — of the'. The piano part is in the right hand, with the left hand providing harmonic support. Measures 34 through 37 are indicated.

Ma - jes - ty of Thy Glo - ry. The glorious com - pa - ny

Ma - jes - ty of Thy Glo - ry.

Ma - jes - ty of Thy Glo - ry.

Ma - jes - ty of Thy Glo - ry.

38 39 40 41 42

This block contains the second system of the musical score. It continues with the four vocal staves and piano accompaniment. The lyrics are 'Ma - jes - ty of Thy Glo - ry. The glorious com - pa - ny' for the Soprano and 'Ma - jes - ty of Thy Glo - ry.' for the other three voices. The piano part continues with measures 38 through 42 indicated.

of the A-pos-tles praise Thee. The good-ly fel-low-ship

praise Thee.

praise Thee. The good-ly fel-low-ship

praise Thee.

43 44 45 46

ff *Gt.* *Sw.*

Detailed description: This system contains measures 43 through 46. It features four vocal staves and a piano accompaniment. The vocal parts have lyrics: 'of the A-pos-tles praise Thee. The good-ly fel-low-ship' and 'praise Thee.'. The piano part includes dynamic markings *ff*, *Gt.*, and *Sw.* and measure numbers 43, 44, 45, and 46.

of the Prophets praise Thee. The no-ble ar-my of

praise Thee.

of the Prophets praise Thee. The no-ble ar-my of

praise Thee.

47 48 49 50

ff *Gt. ff* *Sw.*

Detailed description: This system contains measures 47 through 50. It features four vocal staves and a piano accompaniment. The vocal parts have lyrics: 'of the Prophets praise Thee. The no-ble ar-my of' and 'praise Thee.'. The piano part includes dynamic markings *ff*, *Gt. ff*, and *Sw.* and measure numbers 47, 48, 49, and 50.

Mar - tyrs praise Thee. The ho - ly Church throughout

Mar - tyrs praise Thee. The ho - ly Church throughout

51 52 53 54

Gt. *ff*

Detailed description: This block contains the first system of a musical score. It features four vocal staves (Soprano, Alto, Tenor, Bass) and a piano accompaniment. The vocal parts are in a homophonic setting, with each voice part having the lyrics 'Mar - tyrs praise Thee. The ho - ly Church throughout'. The piano part provides harmonic support. Measures 51-54 are indicated. A forte (ff) dynamic is marked in measure 52.

all the world doth ac - knowl - edge Thee; The

all the world doth ac - knowl - edge Thee; The

all the world doth ac - knowl - edge Thee; The

all the world doth ac - knowl - edge Thee; The

55 56 57 58 59

ff

Detailed description: This block contains the second system of the musical score. It continues the four-voice setting and piano accompaniment. The vocal parts have the lyrics 'all the world doth ac - knowl - edge Thee; The'. The piano part continues the harmonic support. Measures 55-59 are indicated. A forte (ff) dynamic is marked in measure 59.

Fa - ther of an in - fin - ite Ma - jes - ty, Thine a -
 Thine
 Fa - ther of an in - fin - ite Ma - jes - ty. Thine a -
 Thine
 Fa - ther of an in - fin - ite Ma - jes - ty. Thine a -
 Thine
 Fa - ther of an in - fin - ite Ma - jes - ty. Thine a -
 Thine

60 61 62 63

dor - a - ble, true, and on - ly Son; Al - so the
 hon - or - a - ble,
 dor - a - ble, true, and on - ly Son; Al - so the
 hon - or - a - ble,
 dor - a - ble, true, and on - ly Son; Al - so the
 hon - or - a - ble,
 dor - a - ble, true, and on - ly Son; Al - so the
 hon - or - a - ble,

64 65 66 67 68

Sw.

Ho - ly Ghost, the com - fort - er.

Ho - ly Ghost, the com - fort - er.

Ho - ly Ghost, the com - fort - er.

Ho - ly Ghost, the com - fort - er.

69 70 71 72 73 74

pp

Thou art the

Thou art the

Thou art the

Thou art the

75 76 77 78

Gt. *f*

King of Glo - ry, — O — Christ. Thou art the
King of Glo - ry, — O — Christ. Thou art the
King of Glo - ry, — O — Christ. — Thou art the
King of Glo - ry, — O — Christ. — Thou art the

79 80 81 82 83

The musical score for measures 79-83 features four vocal staves and a piano accompaniment. The vocal parts are in G major, with a key signature of one sharp (F#). The piano accompaniment is in 4/4 time, with a steady eighth-note bass line and chords in the right hand. The lyrics are: "King of Glo - ry, — O — Christ. Thou art the".

ev - er - last - ing Son — of the Fa - ther.
ev - er - last - ing Son — of the Fa - ther.
ev - er - last - ing Son — of the Fa - ther.
ev - er - last - ing Son — of the Fa - ther.

84 85 86 87 88

The musical score for measures 84-88 continues the vocal and piano parts. The vocal parts have long notes for "Son" and "Fa - ther". The piano accompaniment continues with the same rhythmic pattern. The lyrics are: "ev - er - last - ing Son — of the Fa - ther.".

Andante

p Solo

When Thou took-est up - on Thee to de - liv - er

89 90 91 92

man, Thou didst hum-ble Thy - self to be born of a
Thou didst not ab - hor the Vir - gins

93 94 95 96

Full *mf*

When Thou hadst o - ver - come the sharp - ness of

Full *mf*

When Thou hadst o - ver - come the sharp - ness of

Full *mf*

When Thou hadst o - ver - come the sharp - ness of

Full *mf*

Vir - gin. When Thou hadst o - ver - come the sharp - ness of
womb.

97 98 99 100

f con moto

death, Thoudidst o - pen the King-dom, Thoudidst o - pen the King-dom of

f con moto

death, Thoudidst o - pen the King-dom, Thoudidst o - pen the King-dom of

f con moto

death, Thoudidst o - pen the King-dom, Thoudidst o - pen the King-dom of

f con moto

death, Thoudidst o - pen the King-dom, Thoudidst o - pen the King-dom of

101 102 103 104 105

f con moto

ff

Heaven to all be - liev - ers. Thou

ff

Heaven to all be - liev - ers. Thou

ff

Heaven to all be - liev - ers. Thou

ff

Heaven to all be - liev - ers. Thou

106 107 108 109 110

Four-part vocal setting of a hymn. The lyrics are: "sit - test at the right hand of God, in the Glo - ry of the". The piano accompaniment features chords in the right hand and a single bass note in the left hand.

111 112 113 114 115

Four-part vocal setting of a hymn. The lyrics are: "Fa - ther. We be - lieve that". The piano accompaniment features chords in the right hand and a single bass note in the left hand. A "Solo Stop" instruction is placed above measure 119.

116 117 118 119 120 121

Solo Stop

poco rit.

Thou shalt come to be our Judge.—

poco rit.

Thou shalt come to be our Judge.—

poco rit.

Thou shalt come to be our Judge.—

poco rit.

Thou shalt come to be our Judge.—

122 123 124 125 126 127

poco rit.

Semi-Chorus
Andante (not too slow)

p

We therefore pray Thee, help Thy— ser - vants,

p

We therefore pray Thee, help Thy— ser - vants,

p

We therefore pray Thee, help Thy— ser - vants,

p

We therefore pray Thee, help Thy— ser - vants,

128 Andante 129 130 131

Organ ad lib.

whom Thou hast re - deem-ed with Thy pre - cious blood.

whom Thou hast re - deem-ed with Thy pre - cious blood.

whom Thou hast re - deem-ed with Thy pre - cious blood.

whom Thou hast re - deem-ed with Thy pre - cious blood.

132 133 134 135

Make them to be num-bered with Thy Saints, — in glo-ry ev - er

Make them to be num-bered with Thy Saints, — in glo-ry ev - er

Make them to be num-bered with Thy Saints, — in glo-ry ev - er

Make them to be num-bered with Thy Saints, — in glo-ry ev - er.

136 137 138 139

last - ing. *p* O Lord save Thy peo - ple, and

last - ing.

last - ing. *p* O Lord save Thy peo - ple, and

last - ing.

140 141 Organ 142 143

bless Thine her - it - age. *Full ff* Gov - ern them,

Full ff Gov - ern them,

bless Thine her - it - age. *Full ff* Gov - ern them,

Full ff Gov - ern them,

144 145 146 147

Gt. ff

gov - ern them, gov - ern them and lift them up for

gov - ern them, gov - ern them and lift them up for

gov - ern them, gov - ern them and lift them up for

gov - ern them, gov - ern them and lift them up for

148 149 150 151

ev - er, for ev - er. Day by—

ev - er, for ev - er. Day by—

ev - er, for ev - er. Day by—

ev - er, for ev - er. Day by—

152 153 154 155

day we mag - ni - fy Thee; And we wor - ship Thy

day we mag - ni - fy Thee; And we wor - ship Thy

day we mag - ni - fy Thee; And we wor - ship Thy

day we mag - ni - fy Thee; And we wor - ship Thy

156 157 158 159

The piano accompaniment consists of two staves. The right hand plays chords and moving lines, while the left hand provides a steady bass line with some harmonic support.

Name, ev - er world with - out end _____

Name, ev - er world with - out end _____

Name, ev - er world with - out end _____

Name, ev - er world with - out end _____

160 161 162 163 164

The piano accompaniment continues with two staves. Measures 160-161 show more complex chordal textures, while measures 162-164 feature sustained chords and melodic fragments in the right hand.

p Semi Chorus

Vouch-safe, O Lord, to keep us this day with -

Vouch-safe, O Lord, to keep us this day with -

Vouch-safe, O Lord, to keep us this day with -

Vouch-safe, O Lord, to keep us this day with -

165 166 167 168

p Organ ad lib.

out sin. O Lord, have mer - cy up -

out sin. O Lord, have mer - cy up -

out sin. O Lord, have mer - cy up -

out sin. O Lord, have mer - cy up -

169 170 171 172

on us, have mer - cy up - on us. O

on us, have mer - cy up - on us.

on us, have mer - cy up - on us. O

on us, have mer - cy up - on us.

173 174 175 176

Organ

Detailed description: This block contains the first system of a musical score. It features four vocal staves (Soprano, Alto, Tenor, Bass) and an organ accompaniment. The lyrics are 'on us, have mer - cy up - on us. O' for Soprano, 'on us, have mer - cy up - on us.' for Alto, 'on us, have mer - cy up - on us. O' for Tenor, and 'on us, have mer - cy up - on us.' for Bass. The organ part is shown in two staves (right and left hand). Measure numbers 173, 174, 175, and 176 are indicated above the organ staff. The word 'Organ' is written above the organ staff in measure 176.

Lord, let Thy mer - cy be light - en up - on us,

Lord, let Thy mer - cy be light - en up - on us,

177 178 179 180

Detailed description: This block contains the second system of the musical score. It features four vocal staves and an organ accompaniment. The lyrics are 'Lord, let Thy mer - cy be light - en up - on us,' for Soprano and 'Lord, let Thy mer - cy be light - en up - on us,' for Alto. The organ part continues in two staves. Measure numbers 177, 178, 179, and 180 are indicated above the organ staff.

as our trust is in Thee.

as our trust is in Thee.

181 182 183 184

This block contains the first system of music, measures 181 through 184. It features two vocal staves and a piano accompaniment. The lyrics "as our trust is in Thee." are written under both vocal staves. The piano part consists of chords and single notes in the right and left hands.

ff O Lord, in Thee, in Thee have I

ff O Lord, in Thee, in Thee have I

ff O Lord, in Thee, in Thee have I

ff O Lord, in Thee, in Thee have I

185 186 187 188

Gt. p molto cresc.

This block contains the second system of music, measures 185 through 188. It features two vocal staves and a piano accompaniment. The lyrics "O Lord, in Thee, in Thee have I" are written under both vocal staves. The piano part includes a guitar part marked "Gt. p molto cresc." and continues with chords and single notes. The vocal staves have a forte (*ff*) dynamic marking.

trust - ed, let me nev - er, let me

trust - ed, let me nev - er, let me

trust - ed, let me nev - er, let me

trust - ed, let me nev - er, let me

189 190 191 192

mf

This block contains the musical notation for measures 189 through 192. It features four vocal staves and a piano accompaniment. The lyrics are "trust - ed, let me nev - er, let me". The piano part includes a *mf* dynamic marking.

nev - er be - con - found - ed.

nev - er be - con - found - ed.

nev - er be - con - found - ed.

nev - er be - con - found - ed.

193 194 195 196

This block contains the musical notation for measures 193 through 196. It features four vocal staves and a piano accompaniment. The lyrics are "nev - er be - con - found - ed.". The piano part includes a *mf* dynamic marking.